

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

| | |
|------------------|------------------------------------|
| Product form | : Substance |
| Trade name | : Prusament PLA by Prusa Polymers |
| Chemical name | : Polylactic Acid |
| EC-No. | : 618-575-7 |
| CAS-No. | : 9051-89-2 |
| Type of product | : Thermoplastic polymers |
| Synonyms | : Prusament PLA, all colours |
| REACH exemptions | : Exempted from REACH registration |

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

| | |
|----------------------------------|--------------------------------------|
| Industrial/Professional use spec | : Consumer uses Professional uses |
| Use of the substance/mixture | : Filaments for 3D printing |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Prusa Polymers a.s.
Partyzanska 188/7A
170 00 Prague 7
Czech Republic
T +420 222 263 718
info@prusa3d.cz - www.prusa3d.cz

1.4. Emergency telephone number

| Country | Official advisory body | Address | Emergency number | Comment |
|----------------|---|-----------------------------------|--|--------------------------------------|
| Ireland | National Poisons Information Centre Beaumont Hospital | PO Box 1297 Beaumont Road 9 | +353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7) | |
| United Kingdom | National Poisons Information Service (Birmingham Centre) City Hospital | Dudley Road B18 7QH | 0344 892 0111 | Only for healthcare professionals |
| United Kingdom | National Poisons Information Service (Belfast Centre) Royal Victoria Hospital | Grosvenor Road BT12 6BA | 0344 892 0111 | Only for healthcare professionals |

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Comments : Product based on polylactic acid (PLA) with additives.

Substance type : Polymer

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-----------------|---|-------|---|
| Polylactic Acid | CAS-No.: 9051-89-2 EC-No.: 618-575-7 | < 100 | Not classified |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Not expected to present a significant hazard under anticipated conditions of normal use. In case of doubt or persistent symptoms, consult always a physician. |
| First-aid measures after inhalation | : Vapors from heated or molten material can be dangerous, as can dust from grinding the material. Remove person to fresh air and keep them warm and calm. Get medical advice/attention if you feel unwell. |
| First-aid measures after skin contact | : Cool skin rapidly with cold water after contact with molten product. Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse eyes with plenty of cool water for at least 10 minutes while pulling eyelides up. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist if irritation persists. |
| First-aid measures after ingestion | : Not expected to present a significant ingestion hazard under anticipated conditions of normal use. |

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Alcohol resistant foam. Water spray. Carbon dioxide. Dry powder. |
| Unsuitable extinguishing media | : Use of heavy stream of water may spread fire. |

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5.2. Special hazards arising from the substance or mixture

Fire hazard : The inhalation of decomposition combustion products may result in health damage.
Hazardous decomposition products in case of fire : Aldehydes. Carbon oxides (CO, CO₂).

5.3. Advice for firefighters

Firefighting instructions : During the fire of the product, keep the safe distance, use suitable breathing protection (isolation device), or self-contained breathing apparatus. Prevent fire fighting water from entering the environment.
Protection during firefighting : Positive pressure self-contained breathing apparatus (SCBA) and structural fire-fighters protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : No flames, no sparks. Eliminate all sources of ignition. Avoid contact with skin and eyes.
Measures in case of dust release : Avoid dust to spread.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Avoid dust formation. Dispose in a safe manner in accordance with local/national regulations.

6.4. Reference to other sections

See Section 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Good ventilation of the workplace required. Avoid contact with skin and eyes. Do not breathe vapours.
Handling temperature : Users should be protected from the possibility of contact with molten material.
Hygiene measures : Use good personal hygiene practices. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place. Protect from moisture. Keep away from food, drink and animal feedingstuffs.
Maximum storage period : 1 year from manufacture. If you do not need filament for longer period of time, insert it back into container with attached silica gel. Product can be hygroscopic.
Storage temperature : 5 – 30 °C
Heat and ignition sources : Keep away from heat and direct sunlight. Keep away from sources of ignition - No smoking.

7.3. Specific end use(s)

Material for 3D-printing.

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Avoid prolonged and repeated contact with skin. Avoid contact with skin and eyes. Do not breathe vapours. Use personal protective equipment according to condition of handling (solid cold material or hot molten material).

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Not required for normal conditions of use

8.2.2.2. Skin protection

Skin and body protection:

Not required for normal conditions of use

Hand protection:

Not required for normal conditions of use

8.2.2.3. Respiratory protection

Respiratory protection:

Not required for normal conditions of use

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Observe the usual environmental precautions, see section 6.2.

Other information:

Do not eat, drink or smoke during use. Wash hands and other exposed areas with soap and water before leaving work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|---------------------------------------|
| Physical state | : Solid |
| Colour | : According to product specification. |
| Appearance | : Colored plastic wire. |
| Odour | : characteristic. |
| Odour threshold | : Not available |
| Melting point | : 150 – 180 °C |

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| | |
|---|---|
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Fine dust dispersed in air may ignite |
| Explosive properties | : Not explosive. |
| It does not have oxidising properties | : Non oxidizing. |
| Explosion limits | : Not applicable |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Flash point | : Not applicable |
| Auto-ignition temperature | : 388 °C |
| Decomposition temperature | : 250 °C |
| pH | : Not available |
| pH solution | : Not available |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Insoluble in water. |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |
| Vapour pressure at 50°C | : Not available |
| Density | : 1,24 g/cm ³ |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not applicable |
| Particle size | : Not available |
| Particle size distribution | : Not available |
| Particle shape | : Not available |
| Particle aspect ratio | : Not available |
| Particle aggregation state | : Not available |
| Particle agglomeration state | : Not available |
| Particle specific surface area | : Not available |
| Particle dustiness | : Not available |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Tg (Glass Transition Temperature): 55-60 °C :

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known under normal conditions of use.

10.4. Conditions to avoid

Overheating. Temperatures above 230 °C. Avoid keeping resin molten for excessive periods of time at elevated temperatures. Prolonged exposure will cause polymer degradation.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Aldehydes. Carbon monoxide. Carbon dioxide.

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

| | |
|-----------------------------------|---|
| Acute toxicity (oral) | : Based on available data, the classification criteria are not met. |
| Acute toxicity (dermal) | : Based on available data, the classification criteria are not met. |
| Acute toxicity (inhalation) | : Based on available data, the classification criteria are not met. |
| Skin corrosion/irritation | : Based on available data, the classification criteria are not met. |
| Serious eye damage/irritation | : Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | : Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | : Based on available data, the classification criteria are not met. |
| Carcinogenicity | : Based on available data, the classification criteria are not met. |
| Reproductive toxicity | : Based on available data, the classification criteria are not met. |
| STOT-single exposure | : Based on available data, the classification criteria are not met. |
| STOT-repeated exposure | : Based on available data, the classification criteria are not met. |
| Aspiration hazard | : Based on available data, the classification criteria are not met. |

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

| | |
|--|---|
| Adverse health effects caused by endocrine disrupting properties | : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 |
|--|---|

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Hazardous to the aquatic environment, short-term (acute) | : Based on available data, the classification criteria are not met. |
| Hazardous to the aquatic environment, long-term (chronic) | : Based on available data, the classification criteria are not met. |

Polylactic Acid (9051-89-2)

| | |
|----------------------|-----------|
| EC50 72h - Algae [1] | 1100 mg/l |
|----------------------|-----------|

12.2. Persistence and degradability

Polylactic Acid (9051-89-2)

| | |
|----------------|---|
| Biodegradation | Biodegradable under industrial composting conditions. |
|----------------|---|

12.3. Bioaccumulative potential

Polylactic Acid (9051-89-2)

| | |
|---------------------------|---------------------|
| Bioaccumulative potential | No bioaccumulation. |
|---------------------------|---------------------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Polylactic Acid (9051-89-2)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

Waste treatment methods : Recycling is preferred to disposal or incineration. Do not remove as household garbage. Dispose in a safe manner in accordance with local/national regulations.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Sort out as plastic waste.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|----------------|----------------|----------------|----------------|
| 14.1. UN number or ID number | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.2. UN proper shipping name | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.4. Packing group | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP)

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

| Section | Changed item | Change | Comments |
|---------|--|----------|------------|
| 1-16 | SDS EU format according to COMMISSION REGULATION (EU) 2020/878 | Modified | 06.12.2022 |

Abbreviations and acronyms:

| | |
|---------|---|
| CAS-No. | Chemical Abstract Service number |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| ED | Endocrine disrupting properties |
| EN | European Standard |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |

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| Abbreviations and acronyms: | |
|-----------------------------|---|
| LD50 | Median lethal dose |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| vPvB | Very Persistent and Very Bioaccumulative |

- Data sources : ECHA Guidance on the compilation of safety data sheets
ECHA C&L Inventory database. Manufacturer Information.
- Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.
- Other information : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

RoHS – Directive 2011/65/EU

Prusa Polymers doesn't have any information about the content of hazardous substances in Prusament PLA, these substances aren't used during the production of filament. No measurements and analyses have been done, but based on the information given by material suppliers, it is not expected any amount of hazardous substances in levels exceeding the concentration described in Directive 2011/65/EU.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.