

Safety Data Sheet

According to Regulation (EC) No 1907/2006, Annex II,
Amended by COMMISSION REGULATION (EU) 2015/830,
According to REGULATION (EC) No 1272/2008

PLA Silk

Version 2.0
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SDS ID: LD00040

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

1.1. Product identifier

Product form : Mixture
Trade name : PLA Silk

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/compound : 3D-Printer filament

1.2.2. Uses advised against

Restrictions on use : This product must not be used in applications other than those identified above,
without first seeking advice of the supplier

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The substance or mixture is not a hazardous substance.

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification: Risk of thermal burns on contact with molten product.

The mixture does not contain substance(s) 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 at a concentration equal to or greater than 0.1 %.

SECTION 3: Composition/information on ingredients

3.1. Substances/Mixture

Mixture

3.2. Ingredient(s):

Chemical Name	% by wt	CAS No.	EC No.	CLP Classification	Acute Toxicity Estimates (ATE)
Polylactic acid	60-90	26023-30-3	N/A	/	/
Thermoplastic Polyurethane	10-40	9009-54-5	210-898-8	/	/

SECTION 4: First aid measures

4.1. Description of first aid measures

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

4.1.2 In case of skin contact:

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. Keep warm and in a quiet place. Call a physician or poison control center immediately. Wash contaminated clothing before re-use.

4.1.3 In case of eyes contact:

Immediately flush eyes with plenty of water, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

4.1.4 In case of ingestion:

Call a physician or poison control centre immediately. Take victim immediately to hospital. If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Artificial respiration and/or oxygen may be necessary.

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

Causes serious eye irritation.

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

If skin irritation or rash occurs, get medical advice/attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- | | |
|--------------------------------|------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | : Use extinguishing media appropriate for surrounding fire: Water spray, Dry powder, Foam, Carbon dioxide. |
| Unsuitable extinguishing media | : Do not use a solid water stream as it may scatter and spread fire. |

5.2. Special hazards arising from the substance or mixture

Explosion hazard	: Material can accumulate some static charge during transfer. Prevent build-up of electrostatic charges (e.g. by grounding).
Hazardous decomposition products in case of fire	: Under fire conditions, hazardous fumes will be present: Carbon dioxide, Carbon monoxide.

5.3. Advice for firefighters

Precautionary measures fire	: Do not allow run-off from fire-fighting to enter drains or water courses.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment. Remove contaminated clothing and shoes.
Emergency procedures	: None in particular. In molten state: Do not breathe vapours. Ventilate spillage area. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

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

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Sweep up and put in a closed container for disposal. If melted: allow liquid to solidify before taking it up.
Other information	: Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. In molten state: Do not breathe vapours. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: To guarantee the quality and properties of the product: Store in a well-ventilated place. Store in original container. Keep container tightly closed to avoid moisture absorption and contamination.
Incompatible materials	: Oxidising agents. Strong acids. Alkalines.
Storage temperature	: 0 – 30 °C (Relative air humidity: <50%)
Heat and ignition sources	: Keep away from heat, sparks and flames. Keep out of direct sunlight.

7.3. Specific and use(s)

3D-Printer filament.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- 8.1.1 Occupational exposure limits:** Poly(ethylene glycol)(CAS# 25322-68-3): TWA-average:1000 mg.m-3; short term-category: IV.(Slovakia 2007)
- 8.1.2 Additional exposure limits under the conditions of use:** Not available.
- 8.1.3 DNEL/DMEL and PNEC-Values:** Not available.

8.2 Exposure controls:

- 8.2.1 Appropriate engineering controls:** Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.
- 8.2.2 Individual protection measures, such as personal protective equipment:**
- Eye/face protection: Safety goggles.
- Hand protection: Wear protective gloves.
- Body protection: Wear protective clothing.
- Respiratory protection: Use with adequate ventilation. In case of insufficient local exhaust ventilation, wear protective mask.
- Thermal hazards: Wear suitable protective clothing to prevent heat.
- 8.2.3 Environmental exposure controls:** Avoid discharge into the environment. According to local regulations, Official regulations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Thread
Colour	multicolor
Odor	Not available
Odour threshold	Not available
Melting point/range	152°C
Flashing point	Not available
Boiling point	Not available
Flammability (solid, gas)	Not available
Evaporation rate	Not available
Flammability limit – lower (%)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
pH	Not available
Viscosity, dynamic (mPa.s)	Not available
Solubility	Not available
Vapour pressure (20° C)	Not available
Bulk density	Not available
Relative density	1.19g/cm ³
Ignition temperature	Not available
Explosive properties	Not available
Other information	No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No available data

10.2. Chemical stability

Stable at room temperature in closed containers under normal storage and handling conditions.

10.3. Possibility of hazardous reactions

Avoid fire,elevated temperatures.direct sunlight

10.4. Conditions to avoid

Incompatible materials. Keep away from direct sunlight. To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

No available data

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under fire conditions, hazardous fumes will be present: Carbon dioxide, Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects:

Acute toxicity:	
ATE mix(oral):	Not available
ATE mix(inhalation):	Not available
Serious eye:	Not available
Respiratory irritation:	Not available

SECTION 12: Ecological information

12.1. Toxicity

Carcinogenicity:
IARC:No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Chronic (long-term) toxicity:
 NOEC(Fish):
 NOEC(Crustacea):
 EC50(Algae/aquatic plants):

Not available.
 Not available.
 Not available.

12.2. Persistence and degradability

Not available.

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Not available.

12.6. Other adverse effects

Not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)
 Waste treatment methods

:This product is not regarded as hazardous waste, as defined by
 Regulation (EC) No.1272/2008.

Sewage disposal recommendations

: Ensure all waste water is collected and treated via a waste water treatment plant.
 Ensure all national/local regulations are observed.

Product/Packaging disposal recommendations

: Empty containers should be taken for recycling, recovery or waste in accordance with
 local regulation.

SECTION 14: Transport information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper shipping name	Not regulated	Not regulated	Not regulated	Not regulated
Transport hazard Class(es)	Not regulated	Not regulated	Not regulated	Not regulated
Packing group	Not regulated	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No	No
Transport in bulk according to Annex II of Marpol and the IBC Code	Not regulated	Not regulated	Not regulated	Not regulated

SECTION 15: Regulatory information

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

Relevant information regarding authorization:	Not applicable.
Relevant information regarding restriction:	Not applicable.
Other EU regulations:	Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.
Other National regulations:	Not applicable

15.2. Chemical safety assessment

Not required

No chemical safety assessment has been carried out

SECTION 16: Other information

16.1. Indication of changes:

Version 1.0 Amended by (EU) 2015/830

Training advice : Ensure staff are informed of and trained on the nature of exposure and basic actions to minimise exposure.

16.2. Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
RID: Regulation for rail International transportation of Dangerous goods
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: Code international maritime dangerous goods code
ICAO: International Civil Aviation Organization
IATA: International Air Transport Association
LC50: median lethal concentration
EC50: The effective concentration of substance that causes 50% of the maximum response.
NOEC: No Observed Effect Concentration
DNEL: derived no-effect level
PNEC: predicted no-effect concentration

16.3. Key literature references and sources for data

ECHA Registered substances data

16.4. Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008		Classification procedure
Eye Irrit. 2	H319	Calculation method

16.5. Relevant H-statements (number and full text):

H319: Causes serious eye irritation.

16.6. Training instructions:

Not applicable.

16.7. Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8. Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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