Safety Data Sheet

According to EU Directive 1907/2006, as amended

Product name: PLA

Date of issue: 23-7-2018 Version: 1.6

1. Identification of the substance/preparation and of the company

1.1 Trade name:
PLA

1.2 Use of the product:
3Dprinter Filament

1.3 Supplier:
eMotion Tech
185 av. des États-Unis
31200 Toulouse, FRANCE
Phone: +33(0)5 82 95 26 62

2. Hazards identification

2.1 Classification of the substance or mixture
Not classified according to Directive 1272/2008/EC.

2.2 Label elements
None

2.3 Other hazards
Danger of burns in contact with hot polymer and hazardous vapors in case of burning.

3. Composition/information on ingredients

3.1 Chemical characteristics:
Biodegradable polymer-blend based on polylactic acid.

3.2 CAS no:
9051-89-2

3.3 Additional information:
No harmful ingredients.

4. First aid measures

4.1 On skin contact:
In case of contact with molten polymer immediately cool the skin with cold water. Medical aid may be required to remove adhering material and for treatment of burns.

4.2 After inhalation:
After inhalation of decomposition gases or dust remove patient to fresh air. Contact a doctor in case of discomfort.

4.3 On ingestion:
No effects known. Rinse mouth with water and drink more water. Contact a doctor in case of discomfort.

4.4 On eyes contact:
Rinse open eyes thoroughly with water.

5. Fire fighting measures

5.1 Extinguishing media
Suitable extinguishing media:
Water spray, Dry powder, Carbon dioxide (CO2).
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
During incomplete combustion release of carbon monoxide, carbon dioxide and hydrocarbons.

5.3 Advice for fire fighters
Fire fighting measures
Evacuate non-essential personnel Move containers from fire area if you can do it without risk. Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective suit.

5.4 Remark:
Accumulations of dust can be inflammable.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Evacuate personnel to safe areas. Do not touch or walk through spilled material. Avoid dust formation. Avoid contact with skin, eyes and clothing. Do not breathe dust. Use personal protective equipment. Ensure adequate ventilation. Risk of slipping

6.2 Environmental precautions
Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

6.3 Methods and materials for containment and cleaning up
Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Following product recovery, flush area with water.

6.4 Reference to other sections
Refer to section (8)

7. Handling and storage

7.1 Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Ensure adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture / Water.

8. Exposure controls/personal protection

8.1 Control parameters
Components with occupational exposure limits

Contains no substances with occupational exposure limit values.
Biological Limit Values
Not established.
PNEC
The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.
DNEL
The obligation to register acc. to the REACH Regulation (EC) No 1907/2006 does not apply to polymers.

8.2 Exposure controls

Appropriate Engineering Controls
Ensure adequate ventilation, especially in confined areas. Keep at temperatures below 230 °C / 446 °F.

Individual protection measures, such as personal protective equipment
Eye Protection
Tightly fitting safety goggles (EN166).
Hand Protection
Protective gloves (EN374): Butyl rubber. Glove thickness: 0.5 mm. Break through time: >8 hours.
Skin and body protection
Long sleeved clothing.
Respiratory Protection
In case of insufficient ventilation wear suitable respiratory equipment. Recommended Filter Type P2 / FFP2.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations.
Environmental exposure controls
The product should not be allowed to enter drains, water courses or the soil

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Solid Filament
Odour	Odourless
Colour	depending on product grade
Odour threshold	Sweet
pH	Not applicable
Melting point	150-170 °C / 302-446 °F
Initial boiling point and boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	flammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	Ca. 1.1-1.3 g/cm3
Solubility(ies)	Insoluble
Partition coefficient (n-octanol/water)	Not available

Auto-ignition temperature	388°C
Decomposition temperature	>250°C
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

10. Stability

10.1 Reactivity: No information available

10.2 Chemical stability:
Stable under recommended storage conditions

10.3 Possibility of hazardous reactions:
No hazardous reactions observed under normal handling and storage conditions

10.4 Conditions to avoid
Temperatures above 230 °C / 446 °F.

10.5 Incompatible materials:
Oxidizing agents, Strong bases

10.6 Hazardous decomposition products
Burning produces obnoxious and toxic fumes Aldehydes, Carbon monoxide (CO), carbon dioxide (CO2)

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Ingestion:	No known effect.
Skin Contact :	No known effect.
Inhalation :	No known effect.
	Product dust may be irritating to eyes, skin and respiratory system. Resin particles, like other inert materials, are mechanically irritating to eyes.
	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Germ Cell Mutagenicity
Not known to cause heritable genetic damage.

Carcinogenicity
Contains no ingredient listed as a carcinogen.

Reproductive Toxicity
Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

STOT-single exposure
No known effect.

STOT-repeated exposure
No known effect.

Aspiration Hazard
No known effect.

12. Ecological information

12.1 Toxicity
Contains no substances known to be hazardous for the environment.

12.2 Persistence and degradability
Decomposes in contact with water. Hydrolysis product (S-lactic acid): Readily biodegradable

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects
No information available..

13. Disposal considerations

13.1 Waste treatment methods
Waste from residues / unused products
Generation of waste should be minimized, check possibilityfor recycling. Waste product can be incinerated or dumped together with domestic waste in compliance with local authority requirements.

Contaminated Packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

Product has been classified as being non-dangerous substance according to transport regulations ADR, RID, IMDG, IATA/ICAO

14.1 UN number
Not applicable
14.2 UN proper shipping name
Not applicable
14.3 Transport hazard class(es)
Not applicable
14.4 Packing Group
Not applicable
14.5 Environmental hazards
No additional data is available
14.6 Special precautions for user
No data available
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not evaluated

15. Regulatory information

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

Restrictions on use: None
Other Regulations : No information available

15.2 Chemical Safety Assessment

No information available.

16. Other information

Information is referenced from other manufacturers.

Abbreviations and acronyms
REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances
EC: European Commission
STOT: Specific Target Organ Toxicity
PBT: Persistent, Bioaccumulative, Toxic
vPvB: very Persistent and very Bioaccumulating
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADN: Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations for the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Dangerous Goods Code
ICAO: International Civil Aviation Organization

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 2015/830. Label element according to Regulation (EC) No 1272/2008.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.