

Issuing Date 19-Jun-2019

Revision Date 19-Jun-2019

Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product Name** PLA - Natural**Other means of identification****Product Code(s)** SDS-2019PLA EN A NAT**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** 3D Printing**Uses advised against** Do not use in printers where temperatures exceed 230°C**Details of the supplier of the safety data sheet****Manufacturer Address**MakerBot Industries LLC
One MetroTech Center, 21st Floor
Brooklyn, NY 11201
USA
1 347 334 6800**Emergency telephone number****Company Phone Number** 1 347 334 6800**Emergency Telephone**

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- +64 0800 446 881 - New Zealand - English Language response

E-mail address RegulatoryCompliance@MakerBot.com**2. HAZARDS IDENTIFICATION****Classification**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance Monofilament **Physical state** Solid **Odor** No data available

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form. See section 7 for more information. See section 8 for more information.

Unknown acute toxicity 1E-08 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation No hazards which require special first aid measures. Move to fresh air in case of accidental inhalation of vapors or decomposition products. Get medical attention.

Eye contact No hazards which require special first aid measures. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.

Skin contact No hazards which require special first aid measures. If skin irritation or rash occurs: Get medical advice/attention.

Ingestion IF SWALLOWED. Rinse mouth thoroughly with water. Get immediate medical advice/attention.

Most important symptoms and effects, both acute and delayed

Symptoms Molten material may cause thermal burns.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Handle in accordance with good industrial hygiene and safety practice.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Handle in accordance with good industrial hygiene and safety practice.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Note: No hazards are expected under normal use. Avoid generation of dust particles.

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection When handling hot material, use heat resistant gloves.

Respiratory protection Minimize dust generation and accumulation. Wear respiratory protection.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state Solid
Appearance Monofilament
Odor No data available
Color Characteristic
Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	150 °C / 302 - 356 °F	
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Insoluble in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	388 °C / 730 °F	
Decomposition temperature	No data available	
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available
Liquid Density No information available
Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity Stable under recommended storage conditions.

Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	Burning produces obnoxious and toxic fumes. Aldehydes. Carbon monoxide. Carbon dioxide (CO ₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	5,050.50 mg/kg
ATEmix (dermal)	2,020.20 mg/kg

Unknown acute toxicity 1E-08 % of the mixture consists of ingredient(s) of unknown toxicity

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
IARC (International Agency for Research on Cancer)	
Group 3 - Not Classifiable as to Carcinogenicity in Humans	
Reproductive toxicity	No information available.
STOT - single exposure	No information available.

STOT - repeated exposure No information available.
Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability No information available.
Bioaccumulation Not likely to bioaccumulate.
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging Not applicable.

14. TRANSPORT INFORMATION

DOT Not regulated
TDG Not regulated
MEX Not regulated
ICAO (air) Not regulated
IATA Not regulated
IMDG Not regulated
RID Not regulated
ADR Not regulated
ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	No information available

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations**US State Regulations**

This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 0	Flammability 1	Instability 0	Physical and chemical properties -
<u>HMIS</u>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Revision Date 19-Jun-2019

Revision Note No information available.

Disclaimer

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End of Safety Data Sheet