

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Name: PLA Natural Filament

Use: 3D Printing and Modeling

Company Identification: MakeShaper Inc.
P.O. BOX 192
Sanford North Carolina 27331

Emergency Telephone Number: 1-919-770-7984 or 1-919-770-6019

General Information Telephone Number: 1-919-776-6925

Email Address:

Revision Date: 2/16/2015

SECTION 2 HAZARDS IDENTIFICATION**Classification of the Substance or Mixture:**

The product is not classified as hazardous according to the Globally Harmonized System (GHS).

Classification According to Directive, Directive 67/548/EEC or Directive 1999/45/EC:

Void

Classification System:

The product does not have to be labelled due to the calculation procedure of the "General Classification guidelines for preparations of the EU" in the latest version.

Label Elements

GHS Label Elements: Void

Hazard Pictograms: Void

Signal Word: Void

Hazard Statements: Void

Potential Health Effects

Skin Contact: Substance may cause slight skin irritation.

Eye Contact: Dust may cause mechanical irritation to eye.
Heated Polymer: Eye contact can cause serious thermal burns.
Vapors formed when polymer is heated may be irritating to the eye.

Inhalation: Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Low hazard for usual industrial or commercial handling.

Ingestion: No harmful effects have been reported upon ingestion.

Primary Routes of Exposure

For Hot Material: Skin contact. Eye contact. Inhalation.

Test Organs: Not applicable

Carcinogenicity: Not listed by NTP, IARC, ACGIH, or OSHA as a carcinogen.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Component / Substance	CAS No.	Concentration [%]
Polyactide Resin	9051-89-2	100

SECTION 4 FIRST AID MEASURES**First Aid Procedures**

Inhalation: Remove individual to fresh air and keep calm. In the event of symptoms, consult a physician and show this data sheet.

Eye Contact: Flush eye(s) for 15 minutes or more; if irritation persists, consult a physician (preferably an eye specialist) and show SDS

Skin Contact: Wash with soap and water.
After contact with molten product, cool rapidly with cold water. Do not pull solidified product away from skin.
Consult a physician immediately.

Ingestion: Rinse out mouth and then drink plenty of water. If symptoms persist consult doctor.

General Advice: Remove contaminated clothing.

SECTION 5 FIRE FIGHTING MEASURES

Hazardous Combustion Products:	Smoke, Carbon monoxide, Carbon dioxide, Hydrocabons, and Hydrogen cyanide (HCN).
Hazardous Decomposition Products:	None with proper storage and handling.
Extinguishing Media:	Water spray, Foam, Dry chemical powder
Extinguishing Media Which Must Not be Used for Safety Reasons:	Carbon dioxide Lack of cooling capacity may permit re-ignition.
Special Protective Equipment for Fire-Fighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.
OSHA Flammable Class:	N/A

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill / Leak Procedures	
Small Spills:	Use personal protective equipment. Do not allow to enter drains or waterways. Do not breathe dust. Pick up mechanically

SECTION 7 HANDLING AND STORAGE

Handling:	Prevent from fire around handling area. Maintain good housekeeping standards to prevent accumulation of dust. To avoid dust explosion resulting from existence of powder, electrostatics eliminator and grounding should be fixed to such equipment as air transferring pipes, bag filters and hoppers. Use electrically conductive filters for bag filters.
Storage Requirements:	Keep container in a well-ventilated place Keep container tightly closed Storage: cool and dry Protect from heat

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment (PPE)	
Hygiene Measures:	No smoking, eating or drinking allowed when using this product. Wash hands before breaks and at end of work shifts.
Hand Protection:	Necessary for handling melted resin.
Respiratory Protection:	In case of insufficient ventilation, respiratory protective equipment: Cartridge for organic gases and vapors.
Eye Protection:	Safety Goggles recommended for use
Protective Clothing:	Impermeable protective clothing is recommended
Engineering Controls:	Good general (mechanical) ventilation should be sufficient to control airborne levels.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State			
Form:	Solid	Water Solubility:	Insoluble
Color:	Natural	Boiling Point:	N/A
Odor:	Sweet	Melting Point:	> 100°C
Vapor Pressure:	N/A	pH:	delivered form not applicable
Specific Gravity:	1.24 g/cm ³	Viscosity, dynamic	N/A

SECTION 10 CHEMICAL STABILITY AND REACTIVITY INFORMATION

Flammability:	Yes
Flash Point:	N/A
Auto-Ignition Temperature:	388 °C
Reactivity with Water:	No
Stability:	Stable and non-reactive under normal handling and storage condition.
Dust Explosion:	Possible if powder exists. Explosion data for powder (<145 mesh) Lower explosion limit 45 g/m ³ Minimum ignition energy 3.6 mJ Maximum explosion pressure 7 × 10 ⁵ Pa Maximum pressure increase rate 3.2 × 10 ⁷ Pa/S
Thermal Decomposition Gases:	CO, HCN, AN, SM and NO
Combustion Energy:	3.53 × 10 ⁷ J/kg (8424 Kcal/kg)

SECTION 11 TOXICOLOGICAL INFORMATION

Irritation:	Fumes or vapors generated from decomposing resin may be irritant to eyes.
Acute Oral Toxicity (LD50):	Not determined
Mutagenicity:	Not determined

SECTION 12 ECOLOGICAL INFORMATION

To avoid being taken by ocean species or birds, disposal of the waste to the ocean and water sources is inhibited.

SECTION 13 DISPOSAL CONSIDERATIONS

General Information:	Dispose of spilled or waste product in accordance with all local, state, and federal regulations.
Disposal Methods:	In accordance with local authority regulations, take to special waste incineration plant
Contaminated Packaging:	If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

SECTION 14 TRANSPORTATION INFORMATION

<u>Sea Transport</u>	<u>Air Transport</u>	<u>DOT (Department of Transportation)</u>	<u>CANADA Transport of Dangerous Goods</u>
IMDG: Not Regulated	ICAO/IATA: Not Regulated	CFR Road: Not Regulated	TDG Road: Not Regulated
		CFR Rail: Not Regulated	TDG Rail: Not Regulated

SECTION 15 REGULATORY INFORMATION

United States

SARA Section 311/312: Fire: No
Pressure generating: No
Reactivity: No
Acute: Yes
Chronic: No

SARA Sections: SECTION 313
Notification : No
This product contains no SARA Title III, Section 313 listed chemicals.

SARA Sections: SARA EHS
Notification : No

Notification Status: TSCA
Notification : Yes

California Proposition 65
Statement: Notification : No
This product does not contain any substance(s) which are defined by the state of California to cause cancer, birth defects, or other reproductive effects.

Canada

Canada: WHMIS CLASSIFICATION
Void

Notification Status: Canadian Environmental Protection Act
DSL
Notification : Yes
All intentional ingredients are listed on the DSL (Domestic Substance List) or have been notified pursuant to the NSN regulations.

SECTION 16 OTHER INFORMATION**Labeling According to EU Directive 67/548/EEC**

R&S Phrases: Not Required
Hazard Symbol: Not Required

Issue Date: 2/16/2015

NFPA Ratings: Health: 1
Flammability: 1
Reactivity: 0

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