

Material Safety Data Sheet

Product Name: PLA Filament

1. COMPANY IDENTIFICATION

Company: XYZprinting, Inc.

Address: No.147, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City, Taiwan (R.O.C.)

Information Phone No.: 886-2-7705 8001

Emergency Phone No.: 886-2-7705 8001

2. HAZARD IDENTIFICATION

Classification: This product is NOT classified according to European Union (EU) Regulation EC No.1272/2008

Hazard Statement: None

Precautionary Statement: None

Signal Word: None

Pictogram: None

Potential Health Effects: See Section 11 for more information

Environmental Precautions: See Section 12 for more information.

Other Hazards: If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form. See Section 7 and 8 for additional information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance Identity	CAS No.	Approx. Weight (%)
Poly lactide resin	9051-89-2	0-90%
Impact modifier	Trade secret	0-10%

4. FIRST AID MEASURES

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Skin Contact: Adverse effects are not expected from accidental skin contact following occupational exposure. After contact with skin, wash immediately with plenty of water.

If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot polymer. DO NOT attempt to remove hot polymer from skin or contaminated clothing as skin may be easily damaged. Call a physician immediately.

Inhalation: Move to fresh air. Call a physician immediately.

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician immediately.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Foam, Water, Carbon dioxide (CO₂), Dry chemical, Alcohol resistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Under Fire Conditions: Cool containers / tanks with water spray. Water mist may be used to cool closed containers. Fine dust dispersed in air may ignite. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Avoid contact with skin and eyes. Avoid dust formation. Remove all sources of ignition. Sweep up to prevent slipping hazard.

Environmental Precautions: Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Methods for Cleaning up: Clean up promptly by scoop or vacuum. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Safe handling advice: Use personal protective equipment. Avoid contact with skin and eyes. This is low hazard for usual industrial or commercial handling. Workers should be protected from the possibility of contact with molten material during fabrication. Avoid dust formation. If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form.

Storage: Store at temperatures not exceeding 122°F/ 50°C. Keep cool. No special restrictions on storage with other products.

Precautions: No special precautions required.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures: Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide appropriate exhaust ventilation at places where dust is formed.

Personal Protective Equipment:

- a. **Eye:** Safety glasses with side-shields.
- b. **Skin and Body:** Impervious clothing.

Respiratory protection: Respirator must be worn if exposed to dust. Wear respirator with dust filter. Respiratory protection is needed if any of the exposure limits in Section 3 are exceeded. Consult an industrial hygiene professional prior to respirator selection and use. Use a positive-pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection.

WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Appearance: Filament

Color: Clear, Translucent, Opaque

Odor: Sweet

pH: Not applicable

Vapor Pressure: Not determined

Vapor Density: Not determined

Evaporation Rate: Not determined

Density: 1.25 g/cm³

Decomposition Temperature: 482°F (250°C)

Melting Point Range: 302- 356°F (150-180°C)

Glass Transition Temperature (Tg): 131-140°F (55-60°C)

Water Solubility: Insoluble

Solubility in other Solvents: Not determined

10. STABILITY AND REACTIVITY

Reactivity: None expected under conditions of normal use.

Chemical Stability: Stable under recommended storage conditions.

Conditions to Avoid: Temperatures above 446°F (230 °C). Avoid keeping resin molten for excessive periods of time at elevated temperatures. Prolonged exposure will cause polymer degradation.

Materials to Avoid: Oxidizing agents, Strong bases

Hazardous Decomposition Products: Burning produces obnoxious and toxic fumes, Aldehydes, Carbon monoxide (CO), carbon dioxide (CO₂)

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure: Eye contact, Skin contact, Inhalation, Ingestion.

Acute Toxicity: There were no target organ effects noted following ingestion or dermal exposure in animal studies.

Local Effects: 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.

Specific Effects: May cause skin irritation and/or dermatitis. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Burning produces irritant fumes.

Long Term Toxicity: Did not cause skin allergic reactions in skin sensitization studies using guinea pigs.

Reproductive Toxicity: No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Ecological toxicity: not available

Persistence and Degradability: Inherently biodegradable under industrial composting conditions

Bio-accumulative Potential: Not expected to bioconcentrate or bioaccumulate.

Mobility in Soil: not available

Other adverse effects: not available

13. DISPOSAL CONSIDERATIONS

1. Residues and spilled material may be hazardous waste due to potential for internal heat generator. Disposal must be in accordance with applicable federal, state, or local regulations.

2. The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture, or weld on or near this container. Since the emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Not dangerous good

United Nations number (UN No): Not applicable

UN Proper shipping name: Not applicable

Transport hazard class: Not applicable

Packing group number: Not available

Marine pollutant: None

Specific transport measures and precautionary conditions: not available

15. REGULATORY INFORMATION

Applicable Regulations: N/A

16. OTHER INFORMATION

While XYZprinting, Inc. believed that data contained herein are accurate and derived from qualified sources the data are not be taken as a warranty or representation for solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local and regulation.