



Product Name: 3D-Fuel™ Standard PLA
Product Code: Standard PLA

Revision Number: 02
Revision Date: 09-01-2020

Print Date: 09-01-2020

Safety Data Sheet

In accordance with 29 CFR 1910.1200, ANSI Z400.1-2004, and ISO 11014-1: 1994.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name: 3D-Fuel™ Standard PLA **Product Code:** Standard PLA
Product Use: A monofilament designed for 3D printing

Supplier: 3DomFuel Inc., 2222 7th Ave N, Fargo, ND, 58102 United States
Customer Information Center: (844) 333-3616 / sales@3dfuel.com

Emergency Telephone Numbers (24 hours a day): (844) 333-3616

2. HAZARDS IDENTIFICATION

Appearance: Clear, translucent, opaque, monofilament in its natural state.
Color: Clear Translucent Opaque
Physical State: Solid
Solid/Printing Odor: Sweet

Potential health effects:

Sensitization: Did not cause sensitization on laboratory animals

Specific Hazards: No information available

Flammability: Fine dust dispersed in air may ignite

Environmental

Precautions: Not determined See Section 12 for more information.

NFPA Rating: Data not available
Health: 1 Flamm: 1 Reactivity: 0
Special: Not determined

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %	OSHA Exposure Limits	ACGIH Exposure Limits
Poly lactide Resin	>98	None	None

All ingredients in quantities >1.0% (0.1% for carcinogens) that are potentially hazardous per OSHA definitions.

Other Standards: This material can generate Particulates not Otherwise Classifiable (PNOC). The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15mg/m³ for total dust and 5mg/nf for the reparable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10mg/rrf for inhalable particulates and 3 mg/m³ for reparable particulates.

4. FIRST AID MESAURES

Emergency Telephone Numbers (24 hours a day): (844) 333-3616

The information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult the Company for Further Information

3D-Fuel™ and logos are trademarks or registered trademarks of 3DomFuel Inc. in the USA and other countries.

NOTIC REGARDING MEDICAL APPLICATION RESTRICTIONS: The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.



Product Name: 3D-Fuel™ Standard PLA

Revision Number: 02

Print Date: 09-01-2020

Product Code: Standard PLA

Revision Date: 09-01-2020

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

Ingestion: Drink water as a precaution. Never give anything by mouth to an unconscious person.

Notes to physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability: Auto-ignition Temperature: 388C

Flammability Limits in Air:

Flammable limits in air – lower (%): Not applicable

Flammable limits in air – upper (%): Not applicable

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.

Extinguishing media which must not be used for safety reasons: No information available

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

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 spray water. Water mist may be used to cool closed containers.

Other Information: 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. See Section 8. Remove all sources of ignition. Avoid dust formation. Avoid contact with skin and eyes. 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: Shovel into suitable container for disposal

7. HANDLING AND STORAGE

Safe Handling Advice: Avoid contact with skin and eyes. Avoid dust formation. Workers should be protected from the possibility of contact with molten material during fabrication. Low hazard for usual industrial or commercial handling. Use personal protective equipment. See Section 8.

Storage: Store in cool place. Keep at temperatures below 122F (50C). 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.

Control Parameters: None

Personal Protective Equipment:

Eye Protection: Safety glasses with side-shields, goggles.

The information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult the Company for Further Information

3D-Fuel™ and logos are trademarks or registered trademarks of 3DomFuel Inc. in the USA and other countries.

NOTIC REGARDING MEDICAL APPLICATION RESTRICTIONS: The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.

Product Name: 3D-Fuel™ Standard PLA

Revision Number: 02

Print Date: 09-01-2020

Product Code: Standard PLA

Revision Date: 09-01-2020

Skin and Body Protection: 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 2 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.

Hand Protection: Preventative skin protection.

Hygiene Measures: Avoid contact with skin, eyes, and clothing

Exposure Limits: See Section 2

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, translucent, opaque

Color: Clear, Translucent, Opaque

Physical State: Solid

pH: Not applicable

Vapor Pressure: Not determined

Vapor Density: Not determined

Evaporation Rate: Not determined

Density: 1.24g/cc

Boiling Point/Range: Not applicable

Decomposition Temperature: 482F (250C)

Melting Point/Range: Not determined

Water Solubility: Insoluble

Solubility in other Solvents: None known

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions

Conditions to Avoid: Temperatures above 446F (230C)

Material to Avoid: Oxidizing agents. Strong bases.

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

Polymerization: Not applicable

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: May cause eye/skin irritation. Product dust may be irritating to eyes, skin, and respiratory system.

Caused mild to moderate conjunctival irritation in eye irritation studies using rabbits. Caused very mild redness in dermal irritation studies using rabbits (slightly irritating). Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

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

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.

Mutagenic Effects: Not mutagenic in AMES Tests

Reproductive Toxicity: No data is available on the product itself

Carcinogenic Effects: No data is available on the product itself

Target Organ Effects: There were no target organ effects noted following ingestion or dermal exposure in animal studies.

Skin: LD50/dermal/rabbit > 2000 mg/kg

The information herein is given in good faith, but no warranty, express or implied, is made. Consult the company for further information.

3D-Fuel™ and logos are trademarks or registered trademarks of 3DomFuel Inc. in the USA and other countries.

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.



Product Name: 3D-Fuel™ Standard PLA
Product Code: Standard PLA
Ingestion: LD50/oral/rat > 5000 mg/kg

Revision Number: 02
Revision Date: 09-01-2020

Print Date: 09-01-2020

12. ECOLOGICAL INFORMATION

Mobility: No data available
Bioaccumulation: Does not bioaccumulate. Inherently biodegradable
Ecotoxicity Effects: EC50/72h/algae > 1100 mg/L

13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products: In accordance with local and national regulations. Do not contaminate ponds, waterways, or ditches with chemical or used containers. Contact manufacturer.

THE COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information on Ingredients).

14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT):
Proper shipping name: Not regulated as a hazardous material

IMDG:
Proper Shipping Name: None Hazard Class: Not regulated
UN/Id No.: None packing group: None

ICAO/IATA:
Proper Shipping Name: None Hazard Class: Not regulated.
Packing Group: None

15. REGULATORY INFORMATION

(Not meant to be all inclusive—selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the print date shown above. However, now warranty, express, or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS
Sara 313 title III: Not Listed

TSCA Inventory List - Listed State

Regulations
California Proposition 65 Not listed

The information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult the Company for Further Information

3D-Fuel™ and logos are trademarks or registered trademarks of 3DomFuel Inc. in the USA and other countries.

NOTIC REGARDING MEDICAL APPLICATION RESTRICTIONS: The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.



Product Name: 3D-Fuel™ Standard PLA
Product Code: Standard PLA
International Inventories Canada DSL

Revision Number: 02
Revision Date: 09-01-2020

Print Date: 09-01-2020

Inventory List: Listed
Reach/EU EINECS List: Components are in compliance with and/or listed
Japan (ECL): Listed
Australia (AICS): Listed
Korean Chemical Inventory: Listed
Philippines (PICCS) Inventory: Not Listed
China Inventory of Existing Chemical Substances List: Listed

16. OTHER INFORMATION

Label Information: 3D-Fuel™ Standard PLA
Product Code: Standard PLA

Reason for Revisions: Not applicable

Revision Date: 09-01-2020
Print Date: 09-01-2020

Recommended Restrictions: None
Prepared by: 3DomFuel Inc.

The information herein is given in good faith, but no warranty, express or implied, is made. Consult the company for further information.

3D-Fuel™ and logos are trademarks or registered trademarks of 3DomFuel Inc. in the USA and other countries.

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: The company does not recommend any of its products, including samples, for use: (A) in any application which is intended for any internal contact with human body fluids or body tissues (B) as a critical component in any medical device that supports or sustains human life; and (C) specifically pregnant women or in any applications designed specifically to promote or interfere with human reproduction.