



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

Revision Number: 01
Revision Date: 02/01/2016

Print Date: 02/01/2016

Material 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™ Advanced PLA

Product Code: Advanced PLA

Product Use: A monofilament for 3D printing

Product Description: Biodegradable Polymer Filament

Supplier: 3DomFuel, 3041 ½ Main Ave, Fargo, ND, 58103 United States

Customer Information Center: 1-877-336-3097 info@3D-Fuel.com

2. HAZARDS IDENTIFICATION

This product is not classed as dangerous according to EEC directives 67/548/EEC and 99/45/EC, including amendments 2001/60/EC and 2006/8/EC. Safety measures used when typically processing thermoplastic melt materials should be adopted. Fumes from melt may cause eye, skin, and respiratory tract irritation. Use local exhaust ventilation. Wear protective clothing. Avoid touching molten polymer. Eye wash fountains and safety showers must be easily accessible.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: Compound of biodegradable polymers

CAS Number: Polylactide Resin 9051-89-2

Weight %: >98

OSHA Exposure Limits: None

ACGIH Exposure Limits: None

Dangerous Components: None

Form: Filament

Odor: Slight/none at room temperature

4. FIRST AID MEASURES

Emergency Telephone Numbers: 1-877-336-3097

Transportation Information Chemtrec: 1-877-336-3097

General Information: The most likely hazard arise from burns by molten material. Apply copious amounts of cold water and seek medical attention.

Inhalation: If melt fumes are inhaled move to fresh air and seek medical attention.

Eyes: 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. Do not induce vomiting without medical advice. Call a physician immediately.

5. FIRE FIGHTING MEASURES

Auto-ignition Temperature: > 388°C

Explosion Hazards: None anticipated. Avoid powder generation from filament

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

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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.



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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.

Non-suitable Extinguishing Media: None known.

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: User 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

Handling: Use personal protective equipment. Avoid contact with skin and eyes. Low hazard for usual industrial or commercial handling. Workers should be protected from the possibility of contact with molten material during printing. 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 product dry and sealed indoors at room temperature. Avoid temperatures exceeding 50°C. Keep cool. No special restrictions on storage with other products.

Precautions: No special precautions required.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit Values: None

Exposure Controls: Personal protective equipment

Occupational Exposure Controls: Not necessary during appropriate use

Environmental Exposure Controls: Not necessary during appropriate use

Advice for Engineering Controls: Avoid electrostatic charge. Where available use exhaust ventilation to prevent the build-up of fumes and/or dust

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information: Pigmented or unpigmented solid material (usually granules/filament)

Odor: Sweet

Vapor Pressure at 20°C: Not applicable

Explosiveness: Not applicable (but avoid dust generation)

Explosive Limit: Not applicable

Melting Range: 150-180°C/302-356°F

Auto Ignition Point: >388°C

Density at 20°C: 1.25 g/cm³

Solubility in Water: Non-soluble

pH: Not applicable

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10. STABILITY AND REACTIVITY

Reactivity: None expected under conditions of normal use.

Chemical stability: Stable under recommended storage conditions

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

Material to Avoid: Strong acids, bases and oxidizing agents may react with acids with formation of CO₂

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure: Eye contact, skin contact, inhalation, ingestion.

Acute Toxicity: 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 flames.

Long Term Toxicity: None found

Carcinogenic Effects: None of the components of this product are listed as carcinogens by IARC, NTP, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity: EC50/72h/algae > 1100 mg/L

Mobility: No data available

Persistence, Degradability: No data available

Bioaccumulation: Does not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with national, state, and local regulations.

THE COMPANY HAS NO CONTROL OVER THE MANAGEEMTN 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

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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, no 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.

This product is not hazardous according to 67/548/EEC and 99/45/EC, and subsequent amendments.

The substances used in this product comply with the inventory listing of the US Toxic Substances Control Act (TSCA), and are registered according to the European REACH regulations. No substances of very high concern are included.

16. OTHER INFORMATION

Label Information: 3D-Fuel™ Advanced PLA

Product Code: Advanced PLA

Reason for Revisions: Not applicable

Revision Date: 6-1-2015

Print Date: 6-1-2015

Recommended Restrictions: None

Prepared by: 3DomFuel™

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