

## SAFETY DATA SHEET

In accordance with 29 CFR 1910.1200:2012, ANSI Z400.1-2010, and ISO 11014-1: 2009.

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE

#### **COMPANY/UNDERTAKING**

Product name: Fiberlogy HD PLA filament  
Product code: PLA  
Product Use: FDM based 3D printing  
Supplier: Fiberlab S.A., Brzezie 387, 32-014 Brzezie, Poland

### 2. HAZARDS IDENTIFICATION

Classification: This product is NOT classified according to 29 CFR 1910.1200 Hazard Communication Standard 2012

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.

Special advice on hazards: Danger of burns in contact with hot polymer.  
Hazardous vapours in case of burning.

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

Chemical name and CAS	Weight %	OSHA Exposure Limits	ACGIH Exposure Limits:
Poly lactide resin 9051-89-2	>98	None	None
Conditioner / Pigment	<2	None	None

Other standards: This material can generate Particulates Not Otherwise Classifiable (PNOC). The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15 mg/m<sup>3</sup> for total dust and 5mg/m<sup>3</sup> for the respirable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10 mg/m<sup>3</sup> for inhalable particulates and 3 mg/m<sup>3</sup> for respirable particulates.

### 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: In case of contact with molten polymer immediately cool the skin with cold water. Medical aid may be required to remove adhering material and for treatment of burns.

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

Flammability: Autoignition temperature: 388 °C

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 (CO<sub>2</sub>), Dry chemical, Alcohol resistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

Unsuitable extinguishing  
media:

None known

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.

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. 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. Low hazard for usual industrial or commercial handling. Users 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 50 °C/ 122 °F. Keep cool. No special restrictions on storage with other products.

Precautions:

No special precautions required.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Control:

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.

Exposure limits:

None established. This material can generate Particulates Not Otherwise Classifiable (PNOC). The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15 mg/m<sup>3</sup> for total dust and 5 mg/m<sup>3</sup> for the respirable fraction.

The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10mg/m<sup>3</sup> for inhalable particulates and 3mg/m<sup>3</sup> for respirable particulates.

**Personal protective equipment:**

Eye protection:	Safety glasses with side-shields. Goggles.
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 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. <b>WARNING:</b> Air purifying respirators do not protect users in oxygen-deficient atmospheres.
Hand protection:	Preventive skin protection.
Hygiene measures:	Avoid contact with skin, eyes and clothing.
Special hazard:	Users should be protected from the possibility of contact with molten material during fabrication.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state:	Solid
Appearance:	Round profile
Color:	Clear, Translucent, Opaque or coloured.
Odor:	Sweet
pH:	Not applicable
Vapor pressure:	Not determined
Vapor density:	Not determined
Evaporation rate:	Not determined
Density:	1.24
Decomposition temperature:	482 °F (250 °C)
Boiling point / boiling range:	Not applicable
Melting point / melting range:	165-180 °C (329- 356 °F), Tg (Glass Transition Temperature): 55-60 °C (131-140 °F)

Autoignition temperature: 388 °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 (CO<sub>2</sub>)  
Possibility of hazardous reactions: None expected under conditions of normal use

#### 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.  
Mutagenic effects: Not mutagenic in AMES Test.  
Reproductive toxicity: No data is available on the product itself.  
Carcinogenic effects: None of the components of this product are listed as carcinogens by IARC, NTP, or OSHA.  
Target organ effects: There were no target organ effects noted following ingestion or dermal exposure in animal studies.



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

Ingestion: LD50/ oral/ rat > 5000 mg/kg

**12. ECOLOGICAL INFORMATION**

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

Persistence and degradability: Inherently biodegradable under industrial composting conditions

Bioaccumulation: Not expected to bioconcentrate or bioaccumulate.

Mobility: No data available

**13. DISPOSAL CONSIDERATIONS**

Waste from residues / unused products:

In accordance with local and national regulations (i.e. EU91/15/CEE, EU 91/689/CEE, EU 94/62/CEE and following). Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container.

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.

**14. TRANSPORT INFORMATION**

**U.S. Department of Transportation (DOT)**

Proper shipping name: None  
Hazard class: Not regulated.  
Packing group: None  
Hazardous substances (RQ): None

**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.  
UN-No.: None  
Packing group: None



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**15. REGULATORY INFORMATION**

EU regulations: This product does not require a hazard warning label in accordance with EC Directives.

Water exposure: No risk of water pollution.

**16. OTHER INFORMATION**

This data is based on current state of our information and experience.  
The safety data sheet describes our product in terms of safety requirements.  
Preceding data is not applicable as a warranty of product properties.  
It is the responsibility of the recipient to observe the existing legal regulations for the use of this product.