

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Identification of the substance / preparation

Product name: Fillamentum PLA Extrafill

1.2 Application

Use of the substance or mixture: Filaments for 3D printing
Recommended restrictions on use: Designed for professional / industrial use.

1.3 Manufacturer / Supplier:

Company: Fillamentum Manufacturing Czech s.r.o.
Address: nám. Míru 1217
768 24 Hulín
Czech Republic
ID: 29233275
Website: www.fillamentum.com
Telephone: +420 720 060 947
E-mail: helpdesk@fillamentum.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008.

2.2 Label elements

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008.

2.3 Other hazards

No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	CAS No.	Content [weight %]
Poly lactide resin	9051-89-2	> 98

Other standards:

European Agency for Safety and Health at Work has stated the limits for Particulates Not Otherwise Classified (PNOC). Permissible exposure limits (PEL) and time-weighted average (TWA) for PNOC is:

15 mg/m³ for total dust,
5 mg/m³ for respirable fraction.

The American Conference of Governmental Industrial Hygienists (ACGIH) has stated the threshold limit value (TLV) and time-weighted average (TWA) for PNOC:

10 mg/m³ for inhalable particulates,
3 mg/m³ for respirable particulates.

Additional information: No information available.

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

In case of skin contact:

AFTER CONTACT WITH HOT MELTED MATERIAL: Immediately cool with plenty of water. Do not remove the product crusts created on skin by violence or with solvents. Seek medical attention immediately for the treatment of potential skin burns.

AFTER CONTACT WITH MATERIAL AT ROOM TEMPERATURE: Carefully wash skin with plenty of water and soap.

In case of eye contact:

Rinse immediately with plenty of water for at least 15 minutes. Rinse also under the eyelids. Immediately call a physician.

In case of inhalation:

Move to fresh air and call a physician.

In case of 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 for physician:

Treat symptomatically.

4.2 Most important symptoms and effects, both acute and delayed

No information is available.

4.3 Indication of any immediate medical attention and special treatment needed

No information is available.

SECTION 5: FIREFIGHTING MEASURES

Flammability:

Autoignition temperature: 388 °C

Flammability Limits in Air:

Flammable limits in air - lower (%):

Not applicable

Flammable limits in air - upper (%):

Not applicable

5.1 Extinguishing media

Suitable extinguishing media

foam, water, carbon dioxide (CO₂), dry chemicals, 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

5.2 Special hazards arising from the substance or mixture

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

5.3 Advice for firefighters

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.

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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

6.1.2. For emergency responders

Use with proper personal protective equipment (see Section 8).

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

No information available.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Use personal protective equipment as required.
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 fabrication.
Avoid dust formation.
If small particles are generated during further processing, handling, or by other means, combustible dust concentrations may form in air.

7.2 Conditions for safe storage, including any incompatibilities

Keep the package well closed and dry. Storage temperature must be under 40 °C.

7.3 Specific end uses

No information is available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

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/m³ for total dust,
- 5 mg/m³ for inhalable particulates,
- 3 mg/m³ for respirable particulates.

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.

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

8.2 Exposure controls

Hand protection:	Use preventive gloves for skin protection.
Eye protection:	Use personal protection equipment for eyes and face.
Respiratory protection:	If exposed to dust, respirator with dust filter must be worn. Respiratory protection is needed if any of the exposure limits in Section 3 are exceeded. Consult an industrial hygiene professional prior to respiration 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.
Skin and body protection:	Use the protective clothing.
Special hazard:	Users should be protected from the possibility of contact with molten material during processing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical Appearance:	Solid, natural or colored filament
Appearance:	Natural or colored filament.
Colour:	Natural or colored.
Odor:	Sweet.
pH:	Not applicable.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
Density	1,25 g/cm ³
Decomposition temperature:	250 °C
Boiling point / boiling range:	Not applicable.
Melting point / melting range:	150-180 °C, T _g (glass transition temperature) 55-60 °C
Autoignition temperature:	388 °C
Flammability:	Fine dust dispersed in air may ignite.
Flammability Limits in Air:	No information available.
Water solubility.	Insoluble.
Solubility in other solvents:	Not determined.
Solubility:	Not determined.

9.2 Other information

The mentioned values may not match the product specification. The specific values must be found in the technical datasheet.

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No reactivity is expected under conditions of normal use.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None expected under conditions of normal use.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Oxidizing agents. Strong bases.

10.6 Hazardous decomposition products

Burning produces harmful and toxic fumes.
Aldehydes, carbon monoxide (CO), carbon dioxide (CO₂)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Principle routes of exposure:

Eye contact, Skin contact, Inhalation Ingestion

Acute toxicity:

No target organ effects were noted following ingestion or dermal exposure in animal studies.

Local effects:

Product dust may irritate eyes, skin and respiratory system.
Resin particles and 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:

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Target organ effects:

No target organ effects were noted following ingestion or dermal exposure in animal studies.

Skin:

LD50/dermal/rabbit > 2000 mg/kg

Ingestion:

LD50/oral/rat > 5000 mg/kg

Further information:

No data available.

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

EC50/72 h/algae > 1100 mg/l

12.2 Persistence and degradability

Inherently biodegradable under industrial composting conditions.

12.3 Bioaccumulative potential

Not expected to bioconcentrate or bioaccumulate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Other adverse effects

No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment method

In compliance with the requirements of Directive 2008/98/EC

Waste from residues / unused products: In accordance with local and national regulations. Should not be released into the environment. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer.

Contaminated packaging: Empty remaining contents. Do not re-use empty containers. Empty containers should be transported/delivered using a registered waste carrier to local recyclers for disposal.

SECTION 14: TRANSPORT INFORMATION

Applicable to: ADR/RID: IMDG: ICAO/IATA: ADN

14.1 UN number

None.

14.2 UN proper shipping name

None.

14.3 Transport hazard class

None.

14.4 Packing group

None.

14.5 Environmental hazards

None.

14.6 Special precaution for user

None.

14.7 Transport in bulk according to Annex II or Marpol and the IBC Code

None.

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum PLA Extrafill

Revision date: 7.1.2019/3

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available.

15.2 Chemical safety assessment

Not applicable.

SECTION 16: OTHER INFORMATION

The product shouldn't be used for any other usage than intended. As the conditions of usage are not under control of the supplier, it is responsibility of the user to adapt the handling according to local laws and regulations.

The product should not be used for any application intended for any internal contact with human body fluid or body tissues, for a critical component in any medical device that supports or sustains human life and for specifically pregnant women or interfere with human reproduction.

The information is published in the best knowledge and information of the company. The final usage of the product must be assessed by the user. The company is not responsible for any risks caused by incorrect handling or processing.