

MATERIAL SAFETY DATA SHEET

Premium PLA CF03

Date of issue: 02-04-2024 / Date of update: 02-04-2024



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identification

Product name: Premium PLA CF03

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Filament for FDM 3D printing / pellets for FGF 3D printing.

1.3. Data on the supplier of the safety data sheet

Supplier: FormFutura BV
Address: Tarweweg 3, 6534 AM, Nijmegen, the Netherlands
Phone: +31 (0)88 743 4000
Email: product.compliance@formfutura.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

This product is NOT classified according to 29 CFR 1910.1200 Hazard Communication Standard 2012 or WHMIS 2015.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information:
Chemical name: PolyLactic Acid (PLA)
CAS No: 9051-89-2
PLA percentage in mixture: $\leq 98\%$
Carbon fiber percentage in mixture (ingredient): $\leq 5\%$
Other ingredients: -

Composition comments:

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Ingredients not listed are not hazardous or their concentrations do not exceed the limit values. The full text of all hazard statements is provided in section 16.

SECTION 4: First aid measures

4.1. Description of 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: Rinse immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot product. Do not peel filament from the skin. Consult a physician.

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.

General information:

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: Firefighting measures



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Flammability:

Autoignition temperature: 388°C

5.1. Extinguishing agents

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 (but much less effectively).

Unsuitable extinguishing media:

None

5.2. Specific hazards associated with a substance or mixture

Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

5.3. Information for the firefighters

Special protective equipment for firefighters:

As in any fire, wear self-contained breathing apparatus, and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See Section 8. Keep away from sources of ignition. Avoid dust formation. Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not flush into surface and ground and ground water or sanitary sewer system.

6.3. Methods and materials preventing the spread of contamination and used for cleaning up

Shovel into suitable container for disposal.

SECTION 7: Handling and storage

7.1. Safe handling advice

Avoid contact with skin and eyes. Employees should be protected from the possibility of contact with the molten filament during printing. Use personal protective equipment if necessary. In the process of printing, gases and vapors may be generated which may irritate the respiratory system, eyes and skin. It should be processed in a well-ventilated room.

7.2. Storage

Store at a temperature between 10°C and 40°C. Protect from sunlight. Store in a dry place.

7.3. Precautions

No special precautions required.

SECTION 8: Exposure controls/personal protection

Engineering measures:

Where possible, local exhaust ventilation and good general room ventilation should be used. Provide adequate exhaust ventilation in places of dust formation.

Exposure limits:



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None established. This material can generate Particulates Not Otherwise Classifiable (PNOC).

General safety and hygiene:

Keep away from foodstuffs, beverages, and food.

Do not eat, drink, smoke.

Do not breathe dust / smoke.

Avoid contact with eyes and skin.

Wash hands before breaks and after work.

Breathing equipment:

It is not required under normal conditions of use. In the case of loose dust / fumes use a breathing apparatus.

Protection of hands:

To operate a hot product, heat resistant gloves.

Eye protection:

Protection glasses.

Body protection:

For transport, hot, molten product - heat-resistant protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Solid.
Appearance:	Wire, filament, or pellets.
Color:	Depends on the pigment used.
Odor:	Sweet.
pH:	No information available.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
Partition Coefficient (n-octanol/water):	Not determined.
Density:	1.25 g/cm ³
Decomposition temperature:	Not determined.
Boiling point / boiling range:	Not applicable.
Melting point / melting range:	150-180°C.
Autoignition temperature:	388°C.
Freezing point:	Not determined.
Flash point:	Not determined.
Flammability:	No information available.
Flammability Limits in Air:	No information available.
Water solubility:	Insoluble.
Solubility in other solvents:	None known.
Solubility:	No information available.
Other Standards:	None

9.2. Other standards

None.



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SECTION 10: Stability and reactivity

10.1. Reactivity

None expected under conditions of normal use.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Conditions to avoid

Temperatures above 230°C.

10.4. Materials to avoid

Oxidizing agents, strong bases.

10.5. Hazardous decomposition products

Burning produces obnoxious and toxic fumes, aldehydes, carbon monoxide (CO), carbon dioxide (CO₂).

10.6. Possibility of hazardous reactions

None expected under conditions of normal use.

10.7. Polymerization:

Not applicable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Principle routes of exposure: Eye contact, Skin contact, Inhalation, Ingestion.

Acute toxicity: Not determined.

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

Mutagenic effects: No data available.

Reproductive toxicity: No data available.

Carcinogenic effects: No data available.

Target organ effects: Not determined.

Ingestion: No data available.

Further information: No information available.

SECTION 12: Ecological information

12.1. Ecotoxicity effects

It is not expected to be very toxic, but if ingested by birds or aquatic life, can cause adverse effects.

12.2. Persistence and degradability



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It is subject to natural biodegradation under composting conditions.

12.3. Bioaccumulation

No data available.

12.4. Mobility in soil

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal is recommended in accordance with national and local regulations. Remains of the product are not classified as hazardous waste. Waste disposal should be handed over to a company with appropriate waste management permits, as defined by national and possibly local regulations.

SECTION 14: Transport information

Not regulated.

SECTION 15: Regulatory information

Not regulated.

SECTION 16: Other information

Explanations of abbreviations:

- **CLP:** Regulation No. 1272/2008
- **IATA:** International Air Transport Association
- **IMDG:** International Maritime Dangerous Goods
- **IMO:** International Maritime Organisation
- **PBT:** Persistent, Bioaccumulative, Toxic
- **REACH:** Registration, Evaluation and Authorisation of Chemicals
- **vPvB:** very Persistent, very Bioaccumulative
- **STEL:** Short-Term Exposure Limit
- **LD50:** Lethal Dose
- **LC50:** Lethal Concentration
- **EC50:** Effective Concentration 50%
- **DNEL:** Derived No-Effect Level
- **PNEC:** Predicted No-Effect Concentration
- **OEL:** Occupational Exposure Limit
- **ADR:** Agreement concerning the International Carriage of Dangerous Goods by Road
- **AND:** European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- **RID:** regulations for international transport of dangerous goods by rail
- **MARPOL:** International Convention for the Prevention of Pollution from Ships

Disclaimer:

This safety data sheet (SDS) is issued based on the latest reference, data, etcetera currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the user's responsibility to take appropriate safety measures for handling.

