

Create it REAL Premium PLA**1. Identification of the substance/preparation and of the company/undertaking**

Trade Name: Create it Real Premium PLA
Chemical Name: Polylactic Acid based polymer
Use of the product: Filament for FDM/FFF 3D printing
Supplier of the data sheet: Create it REAL, Hjulmagervej 28 9000 Aalborg, Denmark
Phone number: +45 25 24 87 11

2. Hazards identification

2.1. Classification according to regulation (EC) No 1272/2008 and GHS

No risk exists to the health of users if the product is handled and processed properly

2.2. 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.

2.3 Special advice on hazards:

Danger of burns while handling the heated or molten product.

3. Composition/information on ingredients

Component: Polylactide resin
CAS-No. 9051-89-2
Purity: >98%
OSHA Exposure Limits: None
ACGIH Exposure Limits: None

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: Adverse effects are not expected from accidental skin contact following occupational exposure. After contact with skin, wash immediately with plenty of water. If skin irritation persists, call a physician. Cool skin rapidly with cold water after contact with hot polymer. DO NOT attempt to remove hot polymer from skin or contaminated clothing as skin may be easily damaged. Call a physician immediately.

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. Firefighting measures

Autoignition temperature: 388°C

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.

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 measure

Personal precautions: Use 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

7.1 Handling: Handle in a well-ventilated area. Install local exhaust at 3D printer's area is recommended when many printers are operated at once. Avoid contact with heated or molten product. Use personal protective equipment (see Section 8). Avoid dust formation and electrostatic charge. Keep away from fire ignition sources.

7.2 Storage: Protect from water, moisture and direct sunlight. Store material in dry rooms and keep material in closed packaging/container with desiccant when not in use. Store at ambient temperatures. Avoid all sources of ignition.

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/m³ for total dust and 5 mg/m³ for the respirable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10 mg/m³ for inhalable particulates and 3 mg/m³ 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. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Hand protection: Preventive skin protection.

Hygiene measures: Avoid contact with skin, eyes and clothing.

Special hazard: Workers should be protected from the possibility of contact with molten material during fabrication.

9. Physical and chemical properties

Physical state:	Solid
Appearance:	Filament
Color:	Multiple Colors
Odor:	Sweet
pH:	Not applicable
Vapor pressure:	Not determined
Vapor density:	Not determined
Evaporation rate:	Not determined
Density:	1.25
Decomposition temperature:	250°C (482°F)
Boiling point / boiling range:	Not applicable
Melting point / melting range	150-180°C (302- 356F)

Glass transition temperature range:	55-60C (131-140F)
Autoignition temperature:	388C
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 230°C (446°F). 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 (CO₂)

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.

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

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

12. Ecological information

Bioaccumulation: Not expected to bioconcentrate or bioaccumulate.

Mobility: No data available

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

Persistence and degradability: Inherently biodegradable under industrial composting conditions

13. Disposal considerations

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.

14. Transport information

Not Classified - not regulated as hazardous material.

15. Regulatory information

Canada DSL Inventory List : Listed

REACH/EU EINECS List : Components are in compliance with and/or are listed.

Japan (ECL) : Listed

Australia (AICS): Listed

Korean chemical inventory: Listed

China inventory of existing chemical substances list : Listed

16. Other information

This data is based on the current state of our information and experience. This information is provided without warranty. This information should help to make an independent determination of the methods to ensure proper and safe use and disposal of the filament