



MATERIAL SAFETY DATA SHEET

PLA NX1

1. PRODUCT IDENTIFICATION

TRADE NAME	Extrudr PLA NX1
MANUFACTURER	FD3D GmbH Klosterstrasse 13 6923 Lauterach AUSTRIA info@extrudr.com
USE OF PRODUCT	Biodegradable polymer compound, suitable for 3D printing filament

2. HAZARD IDENTIFICATION

CLASSIFICATION	No need for classification according to GHS criteria for this product (according to Regulation (EC) No. 1272/2008 [CPL]).
LABEL ELEMENTS	None
SPECIAL ADVICE ON HAZARDS	Danger of burns in contact with hot polymer. Hazardous vapours in case of burning.

3. COMPOSITION

CHEMICAL CHARACTERISTICS	This material can generate Particulates Not Otherwise Classifiable (PNOC). The Occupational Safety and Health Administration (OSHA) PEL/TWA for PNOC is 15 mg/m ³ for total dust and 5 mg/m ³ for the respirable fraction. The American Conference of Governmental Industrial Hygienists (ACGIH) TLV/TWA for PNOC is 10 mg/m ³ for inhalable particulates and 3 mg/m ³ for respirable particulates.
ADDITIONAL INFORMATION	No harmful ingredients

4. FIRST-AID MEASURES

ON 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.
AFTER INHALATION	Move to fresh air. Call a physician immediately.
ON 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.
ON EYES CONTACT	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

5. FIRE-FIGHTING MEASURES

FIRE EXTINGUISHING MEDIA	Foam. Water. Carbon dioxide (CO ₂). Dry chemical. Alcohol resistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.
SPECIAL EXPOSURE HAZARDS	Burning produces obnoxious and toxic fumes: Aldehydes, Carbon monoxide (CO), carbon dioxide (CO ₂).
SPECIAL PROTECTIVE EQUIPMENT	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 suitable protective clothing. Avoid eye contact and inhalation of dusts. Keep ignition sources away.
METHODS FOR CLEANING	Sweep up material and place in a container, risk of slipping. Avoid ingress of material into drainage systems.

7. HANDLING AND STORAGE

HANDLING	Avoid contact with molten polymer. Avoid generation of dust and electrostatic charge.
STORAGE	Protect against moisture and UV radiation. Store cool and keep packaging closed when not in use. Avoid sources of ignition.

8. PERSONAL PROTECTION

TECHNICAL SAFETY MEASURES	With suitable ventilation the threshold limits assumably will not be reached. Avoid electrostatic charge by use of grounding cables.
PERSONAL SAFETY EQUIPMENT	Use adequate safety equipment, e.g. protective clothing, eye protection glasses, heat protection gloves. In case of dust formation wear mask with particle filter.
WORK HYGIENE	No eating or drinking during working. Avoid contact of hotmaterial with the skin. Avoid breathing dust and vapours.

9. PHISICAL AND CHEMICAL PROPERTIES

FORM	Filament
COLOR	colored
MELTING RANGE	180-200 °C
OXIDISING PROPERTIES	not self igniting / flammable
DENSITY	1.22g/cm ³

10. STABILITY AND REACTIVITY

STABILITY	The product is stable at recommended storage contidions.
CONDITIONS TO BE AVOIDED	Avoid extreme heat and all sources of ignition. Thermal decomposition > 250 °C
SUBSTANCES TO BE AVOIDED	Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon monoxide, carbon dioxide, aldehydes, acetic acid, tetrahydrofurane, low molecular weight oligomers.

11. TOXOLOGICAL INFORMATION

LOCAL IRRITATION	Dust can cause irritation of eyes, respiratory organs and skin. After ingestion stomach pain or nausea are possible.
OTHER REMARKS	Based on our state of knowledge and experience no injurious health effects are expected if product is properly handled for the designated use.

12. ECOLOGICAL INFORMATION

ECOTOXICAL EFFECTS	No negative ecological effects known at the present state of knowledge, test results are not available. Due to insolubility in water most probably not hazardous to aquatic organisms.
TOXICITY	EC50/72h/algae > 1100 mg/L
BIOLOGICAL DEGRADATION	Product is biodegradable, in accordance with EN 13432.
BIOACCUMULATION	Due to its consistency and insolubility in water biological accumulation is not expected.

13. DISPOSAL CONSIDERATIONS

PRODUCT	Generation of waste should be minimised, check possibility for recycling. Waste product can be incinerated or dumped together with domestic waste in compliance with local authority requirements.
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14. TRANSPORT INFORMATION

TRANSPORT REGULATIONS	Not classified as hazardous under transport regulations ADR, ADNR, RID, ICAO/IATA, IMDG/GGVSee.
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15. REGULATORY INFORMATION

CHEMICAL SAFETY ASSESSMENT	Not applicable
U. S. REGULATIONS	Sara 313 title III: Not Listed TSCA Inventory List: Listed
INTERNATIONAL INVENTORIES	Canada DSL Inventory List : Listed REACH/EU EINECS List : Components are in compliance with and/or are listed. Japanese inventory (ENCS): Listed Australia (AICS): Listed Korean chemical inventory: Listed Phillipines (PICCS) inventory: Contact NatureWorks for additional information. Taiwan Chemical Substance inventory (TCSI): 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 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.