

PRODUCT NAME:	PLA HS (High Speed) 3D FILAMENT
PRODUCT DESCRIPTION:	PLA HS (High Speed) filament – it's bio-polymer compound based on PLA poly(lactic acid), in the form of a thread. Designed for 3D printing using the FFF/FDM method. Special material formulation allow to get more higher print speed in comparison with standard filaments. Moreover material has increased impact and UV light resistance, and better biodegradability. Filament coiled on plastic spools, cardboard spool, or cardboard core (no spool), vacuum-packed with desiccant in a PA/PE bag, and then in a box.

SECTION 1: Product and Company identification

1.1 Product identification

Product Name:	PLA HS (High Speed) Filament
Trade Name:	FILAMENT 3D PLA HS (High Speed) 1,75mm

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

Identified uses:	Thermal processing of 3D printing
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1.3 Details of the supplier of the safety data sheet

Supplier:	ROSA PLAST Sp. z o.o. 05-074 Hipolitów, Polska ul. Hipolitowska 102B tel: +48 783 62 62
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E-mail address of the person responsible for this safety datasheet:	3d@rosaplast.pl
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SECTION 2: Hazards identification

2.1 Classification:

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

SECTION 3: Composition/information on ingredients

Mixture:

PLA (Polylactide Resin) 90-92% CAS: 9051-89-2

Biopolymer modifier =< 8%

Additives =< 2%

SECTION 4: First aid measures

Eye contact: Rinse immediately with water for several minutes. Remove contact lenses after the initial few minutes and continue flushing for several additional minutes. If negative effects remain, consult a physician immediately.

Skin contact: If skin irritation occur, rinse immediately with water for several minutes. If skin irritation persists, consult a physician.

If molten material comes in contact with the skin, cool the contact place under running stream of cold water. Do not peel material from the skin. Consult a physician immediately.

Inhalation: Move to fresh air. Consult 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.

SECTION 5: Firefighting measures

Flammability:

Autoignition temperature: above 350°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 (but much less effectively).

Unsuitable extinguishing media None.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus, and full protective gear.

Under fire conditions: Risks of ignition (followed by flame propagation or secondary explosions) shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

SECTION 6: Accidental release measures

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

ROSA PLAST Sp. z o.o.

ul. Hipolitowska 102B, 05-074 Hipolitów

tel.: +48 22 783 62 62, www.rosa3d.pl

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

Methods for cleaning up: Shovel into suitable container for disposal.

SECTION 7: Handling and storage

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.

Storage: Store at a temperature between 10°C and 50°C. Protect from sunlight. Store in a dry place.

Precautions: No special precautions required.

SECTION 8: Exposure controls/personal protection

Exposure Control:

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: 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

Physical state: Solid.

Appearance: Wire.

Color: Related to 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: 1,23-1,24 g/cm³

Decomposition temperature: 250°C

Boiling point / boiling range: Not applicable.

Melting point / melting range: 110-180°C

Autoignition temperature: above 350°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.

SECTION 10: Stability and reactivity

Reactivity: None expected under conditions of normal use.

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: exposition on temperatures above 230°C.

Materials to avoid: Oxidizing agents, Strong bases.

Hazardous decomposition products: Burning produces obnoxious and toxic fumes, Aldehydes, Carbon monoxide (CO), carbon dioxide (CO₂), crotonic acid.

Possibility of hazardous reactions: None expected under conditions of normal use.

Polymerization: Not applicable.

SECTION 11: Toxicological information

Principle routes of exposure: Eye contact, skin contact, inhalation, ingestion.

Acute toxicity: Not observed.

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.

Long term toxicity: Not observed.

Mutagenic effects: No data is available.

Reproductive toxicity: No data is available.

Carcinogenic effects: No data is available.

Target organ effects: Not determined.

Ingestion: No data is available.

Further information: No information available.

SECTION 12: Ecological information

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

Persistence and degradability: It is subject to natural biodegradation under industrial composting conditions.

Bioaccumulation: Not expected.

Mobility: No data available.

SECTION 13: Disposal considerations

Waste disposal is recommended in accordance with national and local regulations.

Avoid environmental pollution with both the product, and packaging.

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.

SECTION 14: Transport information

Not regulated.

SECTION 15: Regulatory information

Not regulated.

SECTION 16: Other information

The information contained in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information provided is only intended as a guide to safe handling, use, processing, storage, transport, disposal and release, and no warranty or quality specification should be taken into account. The information applies only to a specific material and may not be relevant for such material used in combination with other materials or other processes, unless otherwise specified in the text. Although some hazards are described in this document, we cannot guarantee that these are the only hazards that exist.

