

PRODUCT NAME: 3D FILAMENT ABS+

PRODUCT DESCRIPTION: ABS+ filament – Poly(acrylonitrile-co-butadiene-co-styrene) in the form of a thread, designed for 3D printing using the FFF/FDM method. Filament coiled on spools, 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: FILAMENT 3D ABS+
Trade Name: FILAMENT 3D ABS+ 1,75mm

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

Identified uses: Thermal processing of 3D printing

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

E-mail address of the person responsible for this safety datasheet: 3d@rosaplast.pl

SECTION 2: Hazards identification

2.1 Classification

Classification according to Regulation (EC) No 1272/2008: The product is not classified as a hazardous substance or mixture

2.2 Label elements

Markings according to EC guidelines No 1272/2008: According to the method of calculating the " General Classification Guideline for the Production of the EC " in the latest valid version, the product does not require labelling.

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Non-applicable.

3.2 Mixture

Chemical name: Polymer/s.

Chemical name: Butadiene-styreneacrylonitrile-n-butyl acrylate polymer.

CAS: 26657-42-1

EC: Polymer.

Classification according to EC regulation 1272/2008: not classified.

Classification 67/548/EEC: not classified.

Percentage share:

Polymer $\geq 97\%$

Additives: $\leq 3\%$

SECTION 4: First aid measures

4.1 Description of 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: If swallowed, call a physician. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed:

May cause skin and eye irritation. Risk of skin burn after contact with molten materials. Additional important symptoms and effects are described in Section 11: Toxicology Information

4.3 Indication of any immediate medical attention and special treatment needed:

Notes to physician: Treat symptomatically. No specific antidote.

SECTION 5: Firefighting measures

Flammability: No information available.

Autoignition temperature: Not determined.

Suitable extinguishing media: Dry chemical fire extinguishers, carbon dioxide fire extinguishers, foam, water fog or fine water spray.

Unsuitable extinguishing media: None known.

Special hazards:

Combustion products:

- may be toxic and/or irritating.
- may include and are not limited to: Nitrogen oxides; Carbon monoxide; Carbon dioxide.
- may include trace amounts of: Styrene; Hydrogen; Cyanide.

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.

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 vapours 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. Store in a dry place.

Precautions: No smoking, open flames or sources of ignition in handling and storage area. Avoid breathing gases and vapours generated during printing.

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 particulate filter, type P2 (meeting standard EN 143). Printer with close chamber with and a particulate pre-filter, type AP2 (meeting standard EN 14387), should be use.

Protection of hands:

- To operate with a molten product, use 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: Almost odorless.

pH: Not applicable.

Vapor pressure: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

Partition Coefficient (n-octanol/water) Not determined.

Density: ~1,06 g/cm³

Decomposition temperature: Not determined.

Boiling point / boiling range: Not applicable.

Melting point / melting range: Not determined.

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Autoignition temperature: Not determined.

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: Soluble in THF (tetrahydrofuran), EDC (ethylene dichloride), acetone and other similar solvents.

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: Temperatures above 300 °C. Elevated temperatures can cause product decomposition.

Materials to avoid: Oxidizing agents, strong bases.

Hazardous decomposition products: Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating.

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:

- Oral toxicity: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.
- Dermal toxicity: No adverse effects anticipated by skin absorption.
- Inhalation toxicity: No adverse effects are anticipated from single exposure to dust. Vapors released during thermal processing may cause respiratory irritation.

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 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: In a ground environment, the material should remain in the soil. In the aquatic environment the material will sink and remain in sediments.

Persistence and degradability: The water insoluble polymer is expected to be inert to environment. Surface photodegradation is expected with exposure to sunlight. No significant biodegradation is expected.

Bioaccumulation: No data available

Mobility: No data available.

SECTION 13: Disposal considerations

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

The company has no control over the management practices or manufacturing process of parties handling or using material. The information presented here pertains only to the product as shipped in its intended condition.

SECTION 14: Transport information

This product is not regulated for transport (ADR/RID,IMDG,IATA)

14.1. UN number

Not applicable.

14.2. Valid UN shipping name

Not applicable.

14.3. Hazard class(es) in transport

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental risks

Based on available data, it is not considered hazardous.

14.6. Special precautions for users

Not applicable

SECTION 15: Regulatory information

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

REACH Regulation (EC) No 1907/2006: The constituents of this product are on the REACH inventory or are exempt from inventory requirements.

15.2 Chemical safety assessment

Not applicable

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 can not guarantee that these are the only hazards that exist.

