

PRODUCT NAME: 3D FILAMENT ROSA-Flex 85A

PRODUCT DESCRIPTION: ROSA-Flex 85A filament is a thermoplastic polyurethane 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 PET/PE bag, and then in a box.

SECTION 1. Product and company identification

1.1. Product identification

Product name: ROSA-Flex 85A
Trade name: ROSA-Flex 85A 1,75mm 0,5kg
Chemical name: thermoplastic polyurethane

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

Identified uses: Extrusion in FDM 3D printing

1.3. Data on the supplier of the safety data sheet

Supplier: **ROSA PLAST Sp. z o.o.**
05-074 Hipolitów, Polska
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tel: +48 783 62 62

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

SECTION 2. Hazard identification

2.1. Classification of a substance or mixture

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: -

2.2. Label elements

This product is not subject to hazard labeling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

2.3. Other hazards

Based on available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%

SECTION 3. Composition/information about ingredients

3.1. Substance

The product does not contain substances classified as being hazardous to human health or the environment pursuant to the provisions Regulation (EU) 1272/2008 (CLP) (and subsequent amendments and supplements) in such quantities as to require the statement.

SECTION 4. First aid measures

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

4.1. Description of first aid measures

Not specifically necessary. Observance of good industrial hygiene is recommended.

4.2. Main acute and delayed symptoms and effects of exposure

No episodes of damage to health ascribable to the product have been reported.

4.3. Indications regarding all immediate medical attention and special treatment of the victim

No episodes of damage to health ascribable to the product have been reported.

SECTION 5. Firefighting measures

5.1. Extinguishing agents

Suitable extinguishing media: The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

Unsuitable extinguishing media: None in particular.

5.2. Specific hazards associated with a substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Information for the firefighters

General information: Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

Special protective equipment for firefighters: Normal firefighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Unintended release into the environment

6.1. Individual precautions, protective equipment and emergency procedures

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate the sewer system or come into contact with surface water or ground water.

6.3. Methods and materials to prevent the spread of contamination and to remove contamination

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. References to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

7.2. Safe storage conditions, including incompatibilities.

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Extrusion in FDM 3D printing.

SECTION 8. Exposure control/personal protective equipment

8.1. Control parameters

Information not available

8.2. Exposure control

Comply with the safety measures usually applied when handling chemical substances.

Hand protection:

- None required.

Skin protection:

- None required.

Eye/face protection:

- None required.

Respiratory protection:

- None required, unless indicated otherwise in the chemical risk assessment.

Environmental exposure controls:

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid.

Colour: Depends on used masterbatch.

Odour: Odourless.

pH: Not applicable.

Melting point/freezing point: Not applicable.

Initial boiling point and boiling range: Not applicable.

Flash point: Not applicable.

Evaporation rate: Not applicable.

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits: Not applicable.

Vapor pressure: Not applicable.

Vapor density: Not applicable.

Relative density: 1,19 g/cm³ (23°C)

Solubility: Not applicable.

Partition coefficient (n-octanol/water): Not applicable.

Auto-ignition temperature: Not applicable.

Decomposition temperature: Not applicable.

Viscosity: Not applicable.

Explosive properties: Not applicable.

Oxidizing properties: Not applicable.

9.2. Other information

Information not available.

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of dangerous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However, the usual precautions used for chemical products should be respected.

10.5. Non-compliant material

Information not available.

10.6. Hazardous decomposition products

Information not available.

SECTION 11. Toxicological information

11.1. General information on toxicological effects: not available

Metabolism, toxicokinetics, mechanism of action and other information:

Not available.

Information on likely routes of exposure:

Not available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Not available.

Interactive effects Information:

Not available.

Acute toxicity:

Does not meet the classification criteria for this hazard class.

Skin corrosion / irritation:

Does not meet the classification criteria for this hazard class.

Serious eye damage / irritation:

Does not meet the classification criteria for this hazard class.

Respiratory or skin sensitization:

Does not meet the classification criteria for this hazard class.

Germ cell mutagenicity:

Does not meet the classification criteria for this hazard class.

Carcinogenicity:

Does not meet the classification criteria for this hazard class.

Reproductive toxicity:

Does not meet the classification criteria for this hazard class.

Stot - single exposure:

Does not meet the classification criteria for this hazard class.

Stot - repeated exposure:

Does not meet the classification criteria for this hazard class.

Aspiration hazard:

Does not meet the classification criteria for this hazard class.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Not available.

12.5 Results of PBT and vPvB assessment

Based on available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6 Other adverse effects

Not available.

SECTION 13. Waste management

13.1. Methods of waste disposal

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorized waste management firm, in compliance with national and local regulations. Solid residues may be suitable for disposal in an authorized landfill site.

Contaminated packaging:

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations

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

Not applicable.

14.6. Special precautions for users

Not applicable.

14.7. Bulk transport in accordance with Annex II to MARPOL73/78 and the IBC Code

Not relevant.

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC:

None.

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006:

None.

Substances in Candidate List (Art. 59 REACH):

Based on available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorization (Annex XIV REACH):

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls Information:

Not available.

15.2 Chemical safety assessment

Has not been performed / is not yet available a chemical safety assessment for the substance.

SECTION 16. Other information

EXPLANATIONS OF ABBREVIATIONS:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006

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- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Note for users:

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. ROSA PLAST Sp. z o.o. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the

users responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

