MATERIAL SAFETY DATA SHEET

3D FILAMENT ROSA-Flex 96A
date of issue: 15.03.2021
date of update: 13.05.2022

PRODUCT NAME: FILAMENT 3D ROSA-Flex 96A

PRODUCT DESCRIPTION: Filament ROSA-Flex 96A is a thermoplastic polyurethane (TPU) in the form of a thread, designed for 3D printing using FFF/FDM technology. The filament is spooled, vacuum-sealed in a bag with a moisture absorber. Packed in cardboard packaging.

SECTION 1. Product and company identification

1.1. Product identification

Product name:	FILAMENT 3D ROSA-Flex 96A
Trade name:	FILAMENT 3D ROSA-Flex 96A 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 ul. Hipolitowska 102 tel: +48 783 62 62
Email address of the person responsible for this safety datasheet:	t.kalynczak@rosaplast.pl

ECTION 2. Hazard identification

2.1. Classification of a substance or mixture
The product has not been classified as posing a risk in accordance with Regulation(EC) No 1272/2008 (CLP) as amended.

2.2. Labelling elements
The product does not require hazard labelling under Regulation (CE) 1272/2008 (CLP) as amended.

2.3. Other risks
Based on the available data, the product does not contain PBT or vPvB ≥ 0.1%.

SECTION 3. Composition/information about ingredients

3.1. Substances
The product does not contain substances classified as hazardous to health and the environment in accordance with the relevant provisions:
Regulation (EU) 1272/2008 (CLP) (with later amendments) in such quantities to require the statement.

SECTION 4. First aid measures

4.1. Description of first aid measures
They are not required. It is necessary to comply with the regulations in occupational hygiene.

4.2. Main acute and delayed symptoms and effects of exposure
There are no known cases of adverse effects on health.

4.3. Indications regarding all immediate medical attention and special treatment of the victim
Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing agents
RECOMMENDED EXTINGUISHING AGENTS
Ordinary extinguishing agents: carbon dioxide, foam, extinguishing powders and water spray.

NOT RECOMMENDED EXTINGUISHING AGENTS
None.

5.2. Specific hazards associated with a substance or mixture
RISKS ASSOCIATED WITH EXPOSURE TO FIRE
Avoid inhalation of the product in decomposition.

5.3. Information for the fire brigade
GENERAL
Use water jets to prevent decomposition of the product and the emergence of substances potentially harmful to health.

Fire protection equipment should always be used in the set. Collect the extinguishing mixture without draining into the sewer. Dispose of contaminated water and extinguishing residues in accordance with applicable standards.

PROTECTIVE EQUIPMENT
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
In the case of vapors or dust dispersed in the air, use respiratory protection. These points refer to those involved in the emergency procedures.

6.2. Environmental precautions
The product must not penetrate into 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 waste management is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling
Before using the product, please read any instructions in this safety data sheet. Avoid releasing the product into the environment. During use do not smoke, drink, do not eat.

7.2. Safe storage conditions, including incompatibilities
TPU should be stored in a dry place at room temperature, preferably around 20°C, and in any case not too high or too low temperature, preferably in a ventilated, cool room.

7.3. Specific end use(s)
None

SECTION 8. Exposure control/personal protective equipment

8.1. Control parameters
None

8.2. Exposure control
Observe the safety measures necessary to handle chemicals.

HAND PROTECTION
Not required.

SKIN PROTECTION
Not required.

EYE PROTECTION
Not required.

RESPIRATORY PROTECTION
Not required unless otherwise indicated with regard to chemical risk evaluation.

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

Appearance: thread
Color: Transparent, slightly yellowish and others depending on the dye used
Odor: odorless
pH: Not available
Melting/freezing temperature: Not available
Initial boiling point: Not applicable
Boiling temperature range: Not available
Flash point: Not applicable
Evaporation rate: Not available
Flammability (solid, gas): Not available
Lower inflammability limit: Not available
Upper inflammability limit: Not available
Lower explosive limit: Not available
Upper explosive limit: Not available
Vapor pressure: Not available
Vapor density: Not available
Relative density : 1.23 g/cm^3 at 23°C
Solubility: Not available
Partition coefficient (n-octanol/water): Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available
Viscosity: Not available
Explosive properties: Not available
Oxidising properties: Not available

9.2. Other information
None

SECTION 10. Stability and reactivity

10.1. Reactivity
Under the recommended conditions of use, there are no specific hazards for reactions with other substances.

10.2. Chemical stability
Stable under recommended conditions of use and storage.

10.3. Possibility of dangerous reactions
No hazardous reactions are foreseeable under the recommended conditions of use and storage.

10.4. Conditions to avoid
None. However, follow the safety rules for chemicals in the world.

10.5. Non-compliant material
None

10.6. Hazardous decomposition products
None

SECTION 11. Toxicological information

11.1. Information on toxicological effects
Metabolism, toxicokinetics, mechanism of action and other information: None
Information on likely routes of exposure: None
Delayed and immediate effects as well as chronic effects from short and long-term exposure: None
Effects of interaction: None

ACUTE TOXICITY
Does not meet the classification criteria for this hazard class

CORROSIVE / IRRITANT EFFECT ON THE SKIN
Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / EYE IRRITATION
Does not meet the classification criteria for this hazard class

RESPIRATORY SENSITISATION OR IRRITATION
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

When using, observe the principles of good industrial practice, avoiding releasing into the environment. In the event of the product entering water courses or in the event of soil contamination or vegetation, notify the relevant services.

12.1. Toxicity
None

12.2. Durability and decomposition capacity
None

12.3. Bioaccumulation capacity
None

12.4. Mobility in soil
None

12.5. Results of PBT and vPvB evaluation
Based on the available data, the product does not contain PBT or vPvB ≥ 0.1%.

12.6. Other adverse effects
None

SECTION 13. Waste management

13.1. Methods of disposal of waste
Reuse, when possible. Neat product residues should be considered special non-hazardous waste.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. Solid residues may be suitable for disposal in an authorised landfill site.

CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations. With application of the current provisions on waste in Europe, if the product is to be treated as refused, we recommend the application of the CER code 07 02 13 - Plastic waste.

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.

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
Information not relevant

SECTION 15. Regulatory information

15.1. Safety, health and environmental legislation specific for the substance or mixture
Category Seveso - Directive 2012/18/EC: None
Restrictions on the product or substances contained in accordance with Annex XVII of Regulation (EC) 1907/2006: None
Candidate List substances (Art. 59 REACH): Based on available data, the product does not contain SVHC ≥ 0.1%.
Substances subject to authorisation (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
Medical checks: None
15.2. Chemical safety assessment

A chemical safety assessment of the substance has not yet been carried out/is not yet available for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

EXPLANATIONS OF ABBREVIATIONS:
- CLP: Regulation (EC) No 1272/2008
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- PBT: persistent, bioaccumulative and toxic according to REACH
- REACH: Regulation (EC) No 1907/2006
- vPvB: Very persistent and very bioaccumulating capacity according to REACH

COMMON BIBLIOGRAPHY:
1. Regulation (EC) No 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) No 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 790/2009 of the European Parliament (I Atp.CLP)
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 of the European Parliament (II Atp.CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp.CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
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)

- The Merck Index. - 10th Edition
- Chemical Handling Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS Web page
- ECHA Agency Website
- Database of SDS models for chemical agents- Ministry of Health and ISS (Istituto Superiore di Sanita)
- Italy

Note for users:

The information contained in this data sheet is based on the knowledge we have at the date of issue of the last version. The user should check that the information provided is correct and comprehensive

in relation to the specific use of the product. This document must not be used to guarantee any specific product properties. As the manufacturer cannot directly control the use of the product, the user is obliged to comply with the hygiene and safety law and regulations. The manufacturer does not take any responsibility for the use of the product.