

PRODUCT NAME: PC + PTFE FILAMENT

PRODUCT DESCRIPTION: PC + PTFE filament is a mixture of polycarbonate and polytetrafluoroethylene in the form of a thread, intended for 3D printing using FFF/FDM. 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 PC + PTFE
Trade name: FILAMENT 3D PC + PTFE 1.75mm 0.5kg
Chemical name: Mixture of PC-polycarbonate, PTFE-polytetrafluoroethylene

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

Identified uses: Heat treatment in FDM 3D printing

Uses advised against: The material is not suitable for medical applications unless medical devices have been examined in accordance with relevant national and international regulations and the required safety tests have been carried out. ROSA PLAST Sp. z o.o. takes no responsibility for the use of this material in the above mentioned applications.

1.3. Data on 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. Hazard identification

2.1. Classification of a substance or mixture

The product has not been classified as hazardous under Regulation(EC) No 1272/2008 (CLP) as amended.

2.2. Labelling elements

The product does not require hazard labelling in accordance with Directive 67/548/EEC, as amended.

2.3. Other risks

Molten material can cause burns. Dusts and particles formed during use may cause mechanical irritation to the eyes, skin and mucous membranes. Grinding of formed products may exacerbate this phenomenon, so inhalation of any dust in the environment should be avoided.

SECTION 3. Composition/information about ingredients

3.1. Substances

The product does not contain substances classified as hazardous or SVHC substances knowingly added at concentrations higher than 0.1% by mass.

SECTION 4. First aid measures

4.1. Description of first aid measures

Eye contact: In case of irritation due to eye contact, wash with plenty of water while holding the curled eyelids. If irritation persists, consult a doctor.

Skin contact: In case of skin irritation, wash with soap and water. In case of skin contact with molten plastic material, immediately cool with water and consult a doctor.

Inhalation: Inhalation of dust or gaseous decomposition products in the event of failure: take the injured person into fresh air and consult a doctor.

4.2. Main acute and delayed symptoms and effects of exposure

Mechanical irritation caused by the reaction of the product particles.

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

Transfer the victim to an air ventilated room and consult a doctor.

SECTION 5. Fire management

5.1. Extinguishing agents

RECOMMENDED EXTINGUISHING AGENTS

Ordinary extinguishing agents: carbon dioxide, foam, extinguishing powders and water mist.

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.

DECOMPOSITION PRODUCTS EMITTED DURING FIRE

Carbon monoxide, carbon dioxide, diphenyl carbonate, phenols, fluorinated compounds, hydrofluoric acid.

Under certain fire conditions, traces of other toxic substances must not be excluded. The formation of additional decomposition and oxidation products depends on the fire conditions.

5.3. Information for the fire brigade

Use an autonomous breathing apparatus and fire-retardant clothing.

SECTION 6. Handling of unintended release into the environment

6.1. Individual precautions, protective equipment and emergency procedures

In the case of vapours or dust dispersed in the air, use respiratory protection. These points refer to those involved in the marketing of the substance, as well as in the event of an emergency.

6.2. Environmental precautions

Avoid ingress of the product into drains, surface areas and groundwater.

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

In case of spillage, collect mechanically without insemiting dust. Do not dispose of in sewers or soil.

6.4. References to other sections

Any information on personal protection and waste management is given in points 8 and 13.

SECTION 7. Handling and storage of substances and mixtures

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 at the workplace.

7.2. Safe storage conditions, including information on any cross-compliance with the

Should be stored in a dry place at room temperature, preferably around 20°C, not too high or too low temperature, preferably in a ventilated, cool room.

7.3. Specific end use(s)

Not available.

SECTION 8. Exposure control/personal protective equipment

8.1. Control parameters

Permissible exposure limits to pollutants in the working environment (ACGIH)

TLV (NDS):	10 mg/m ³	TLV-TWA	Inhaled dust
	3 mg/m ³	TLV-TWA	Inhaled dust
	19 mg/m ³	TLV-TWA	Phenol
	2.3 mg/m ³	TLV-C	Hydrofluoric acid

DEFINITIONS

TLV-TWA (Exposure limits – mean over time): the average concentration calculated on an 8-hour working day and a 40-hour working week, which does not cause harmful effects in exposed workers.

TLV-C (Limit concentration): a concentration which should not be exceeded during operation even within a short period of time.

Derived no-effect level (DNEL): No data available.

Predicted ne-effect concentration (PNEC): no data available.

8.2. Exposure control

During the application of the material and the treatment of the components made of it, provide adequate protective measures and equipment for the removal of any dust in the working environment. During extrusion, remove fumes or vapours using an appropriate exhaust system. In the case of emissions of pollutants into the atmosphere during the treatment of plastic materials, observe their concentration limits as determined by the competent authorities and in force by law.

Skin protection:

When handling in the presence of dust, it is recommended to use EN 388 (2132) gloves and protective clothing. When treating in the presence of fumes and dust, it is recommended to use protective clothing and gloves marked EN 388 (4131), EN 407 (X2XXXX), EN 374-3.

Eye protection:

When handling in the presence of dust, it is recommended to use protective goggles EN 166. During treatment, in the presence of liquid material, it is recommended to use a protective cover.

Respiratory protection:

During the application and treatment of the material, in the presence of dust or gas/steam, it is recommended to use the FFP2 protective mask.

Environmental exposure controls:

Measurements shall be made of emissions resulting from ventilation equipment and from working processes in accordance with environmental regulations.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour: Natural and depending on the dye used.

Odour: Characteristic.

pH: Not available.

Density: 1,03-1.28 g/cm³

Thermal decomposition: >400°C

Self-ignition temperature: 450°C

Flammability: not flammable (Directive 87/548/EEC, as amended).

Explosive properties: Not explosive in the form in which it is being sold.

Solubility in water: Not dissolved at 20°C.

9.2. Other information

Not available.

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 foreseen under the recommended conditions of use and storage.

10.4. Conditions to avoid

Before processing, it is recommended to dry the product in accordance with the technical instructions. ATTENTION! If the material is used at a temperature higher than the highest suggested temperature, a slight decomposition may occur. Avoid contamination with other materials that may create harmful gases and fumes during processing. During cleaning, do not allow the inucement of molten material to spread in the working environment. For more information, refer to the technical literature for recommendations.

10.5. Non-compliant material

Avoid contamination with other materials that could produce harmful gases and fumes during the transformation phase.

10.6. Hazardous decomposition products

Diphenyl carbonate, phenols, fluorinated compounds, hydrofluoric acid

At temperatures above 300°C, polytetrafluoroethylene begins to decompose with the production of corrosive (hydrofluoric acid - HF) and toxic (fluorinated compounds) substances.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

No specific studies have been conducted to determine the degree of toxicity of the product. The evaluation was based on information on similar products and individual ingredients and is based on professional experience and technical literature.

Acute toxicity:

No data available.

Corrosive / irritant effect on the skin:

Dust generated while working with this material can cause mechanical skin irritation.

Serious eye damage / eye irritation:

Dust generated while working with this material may cause mechanical eye irritation.

Respiratory sensitisation or irritation:

No data available.

Mutagenic effects on reproductive diseases:

No data available.

Carcinogenic effects:

No data available.

Reproductive toxicity:

No data available.

Target organ toxicity - single exposure:

No data available.

Target organ toxicity - repeated exposure:

No data available.

Aspiration hazard:

Dust generated during operation with this material may cause mechanical irritation of the upper respiratory tract.

SECTION 12. Ecological information

No special studies of this material have been conducted. It is practically insoluble in water and therefore does not anticipate the release of the substance into water or soil.

When applying product, observe the principles of good industrial practice, avoiding discharge 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

No data available.

12.2. Durability and decomposition capacity

Potentially non-biodegradable. It is expected to be lasting.

12.3. Bioaccumulation capacity

It is not expected to be bioaccumulated.

12.4. Mobility in soil

Based on the morphology and composition of the product, it is not possible to get into the subsoil.

12.5. Results of pbt and vPvB evaluation

The material does not contain PBT substances (persistent, bioaccumulating, toxic) or vPvB (very persistent, very bioaccumulating).

12.6. Other adverse effects

No other environmental effects (ozone, global warming) have been observed.

Water purification systems: the material can be removed from the water by mechanical separation. In accordance with EU and national law, waters in contact with material or embossed/printed elements may require special treatment before being diverted to the sewer network. If necessary, ensure, in accordance with EE and national regulations, the treatment of waste gases from fumes removal installations during the application of the material.

SECTION 13. Waste management

13.1. Methods of disposal of waste

The material must be recycled, disposed of or burned in accordance with applicable local and national regulations. Anything that cannot be recycled or recovered must be transferred to the appropriate facility. Packaging and waste must be disposed of in accordance with applicable local and national regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be disposed of within the meaning of the national waste management regulations.

SECTION 14. Transport information

14.1. UN number (UN number)

Not applicable

14.2. Valid UN shipping name

Not applicable

14.3. Hazard class(s) 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 MARPOL and the IBC Code

Not applicable

SECTION 15. Legal information

15.1. Safety, health and environmental legislation specific to a substance or mixture

Legal references:

Classification and labelling

- Dir. 2001/60/EC
- Dir. 1999/45/EC
- Dir. 92/32/EC
- Dir. 67/548/EEC
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council

Health and safety at work

- D.M. 26/02/2004
- D. Lgs. 233/03 "ATEX"
- Dir. 98/24/WE, 89/391/EEC, 89/654/EEC, 2009/104/EC, 89/656/EEC, 2004/37/EC, 2003/10/EC, 2009/148/EC
- D. Lgs. 81/2008
- D. Lgs. N. 106 03/08/2009

Atmospheric emissions

- D.Lgs. n. 152 03/04/2006
- DM 12/7/94
- Dir. 2008/50/EC
- Dir. 2010/75/EU

Water protection

- D. Lgs. n. 219 of 10/12/2010
- D. Lgs. N. 152 of 03/04/2006
- Dir. 91/271/EEC, 2000/60/EC, 2008/105/EC, 2009/90/EC, 2013/39/EU

Waste disposal

- D. Lgs. N. 152 03/04/2006
- Dir. 2008/98/EC, 94/62/EC, 2001/118/EC

WOO

- D. Lgs 475/92
- D. Lgs. 10/97
- D.M. 02/05/2001
- Dir. 89/686/EEC
- Dir. 93/68/EEC
- Dir. 93/95/EEC
- Dir. 96/58/EC

15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16. Other information**EXPLANATIONS OF THE FOLLOWING:**

- ACGIH: American Conference of Governmental Industrial Hygienists
- CLP: Regulation (EC) No 1272/2008
- PBT: Persistent, Bioaccumulative and Toxic according to REACH
- REACH: Regulation (EC) No 1907/2006
- vPvB: Very durable and very bioaccumulating according to REACH

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: The classification of the product derives from the criterion set by the CLP Regulation, Annex I, Part 2.

The data for the assessment of chemical-physical properties are given in section 9.

Health risks: The classification of a product shall be based on calculation methods in accordance with Annex I of the CLP Regulation, in Part 3, unless otherwise specified in Section 11.

Environmental hazards: The classification of a product shall be based on calculation methods in accordance with Annex I of the CLP Regulation, in Part 4, unless otherwise specified in Section 12.

Note to the user:

The information contained in this Card is based on the knowledge we have at the date of releasing the last version of the card. 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 law and regulations in force on hygiene and safety. The manufacturer does not take any responsibility for the use of the product.



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