

SAFETY DATA SHEET

by Commission Regulation (EC) No 830/2015 (REACH)

PRODUCT NAME: Fillamentum HIPS Extrafill

Revision date: 29.7.2019/2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

1.1 Identification of the substance / preparation

Product name: Fillamentum HIPS Extrafill

1.2 Application

Use of the substance or mixture: Filaments for 3D printing

Recommended restrictions on use: Designed for professional / industrial use.

1.3 Manufacturer / Supplier:

Company: Fillamentum Manufacturing Czech s.r.o.

Address: nám. Míru 1217

768 24 Hulín

Czech Republic

ID: 29233275

Website: www.fillamentum.com

Telephone: +420 720 060 947

E-mail: helpdesk@fillamentum.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008.

2.2 Label elements

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008.

2.3 Other hazards

Risk of skin burns caused by hot melt.

This substance does not contain any components considered to be bioaccumulative, persistent or toxic.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: polymer $(C_8H_8C_4H_6)_x$

3.1 Substances

Chemical name	EC-No	CAS-No	RTECS-No	Classification (1272/2008/EC)	REACH Registration Number
styrene-butadiene copolymer, HIPS	-	9003-55-8	WL6478000	-	No data available

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: Rinse eyes and eyelids with plenty of water for 10-15 minutes. If symptoms occur, get medical attention.

Skin contact: Wash off immediately with soap and plenty of cold water while removing all contaminated clothes and shoes. Get medical attention.
Do not remove product from the skin without medical advisor.

Ingestion: Rinse mouth. Do not induce vomiting. Get medical attention.

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Inhalation: Move to fresh air. Move the victim to rest position and keep him warm. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Hazards: Risk of burns caused by hot melt.

4.3 Indication of any immediate medical attention and special treatment needed

Continue with first aid measures.

Depending on the pathology and clinical findings, patient monitoring and symptomatic treatment are necessary.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam.

In case of small fire: dry powder, carbon dioxide (CO₂), sand, soil.

Unsuitable extinguishing media: High volume water jet.

5.2 Special hazards arising from the substance or mixture

Special hazard: In case of fire may be released: smoke, styrene-monomer, butadiene, aldehydes and organic acids, carbon monoxide, carbon dioxide (CO₂).

5.3 Advice for firefighters

Fire-fighting measures: Evacuate non-essential personnel. Move spools from fire area if you can do it without risk. Keep product and surroundings cool with water spray.

Additional warnings: Wear self-contained breathing apparatus and personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not walk on spilled material. Avoid dust formation. Avoid contact with skin, eyes and clothing. Remove all the sources of ignition.

Ensure adequate ventilation. Do not breathe dust. Use personal protective equipment.

6.2 Environmental precautions

Do not release into the environment. Prevent from entering into soil, drains or water courses.

6.3 Methods and material for containment and cleaning up

Avoid dust formation. Capture mechanically. Throw into appropriate disposal containers.

Take preventive measures against static electricity discharge.

Danger of slipping on spilled material.

6.4 Reference to other sections

Wear personal protective equipment. For other disposal see Section 8 and 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Instructions for safe handling

Avoid dust formation. Suction is necessary in dusty environment. In thermal processing: Risk of skin burns.

Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Advice on protection against fire and explosion

Dust may form an explosive mixture with air. Take precautionary measures against static discharges. Keep away from the source of ignition. Use for earthing. Use the devices protected against explosion and non-sparking tools.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep the package well closed and dry in a dry and well-ventilated place. Protect from high temperatures and sunshine.

Storage temperature: < 40 °C

7.3 Specific end uses

No information is available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Product contains low level of residual monomers and chemicals for processing (styrene, ethylbenzene and trace of butadiene), that could be formed during thermal processing. The way of identity and level of formed impurities is dependent on conditions of processing (temperature etc.). The user is responsible for appropriate protection and safety measures.

8.2 Exposure controls

Engineering measures:

In case of thermal processing, provide for extraction of the vapours or adequate ventilation. Avoid dust formation. Dust must be extracted directly at the point of origin.

Individual protection measures, such as personal protective equipment

Eye protection:

Wear close fitting safety glasses in accordance with EN 166.

Hand protection:

Wear protective gloves according to the EN 374.

Material: nitrile rubber - material thickness 0,11 mm. Resistance time > 480 min. Follow the information regarding permeability and resistance time given by producer of gloves.

While processing: Non-permeable, heat-insulating gloves according to EN 407.

Material: leather

Follow the information regarding permeability and resistance time given by producer of gloves.

Respiratory protection:

Do not breathe dust. In case of dust or aerosol formation use respiration with an approved filter, type A-P2 according to EN 14387.

Chest and foot protection:

Use appropriate protection clothes. Wear boots or safety shoes.

Hygiene Measures:

Do not eat, drink or smoke while using the product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use. Eyewash device must be available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical Appearance:	Solid, natural or coloured filament
Odour:	Slightly odour
pH:	Not applicable
Melting/freezing point:	105-135 °C
Boiling point/boiling range:	Not applicable
Flash point:	> 280 °C
Evaporation rate:	Not applicable
Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not available
Upper explosion limit	Not available
Vapour pressure	Not applicable
Vapour density	Not applicable
Density	1,03 g/cm ³ (20 °C)
Solubility:	
Water solubility	Insoluble substance
Partition Coefficient (n-octanol/water)	Not applicable Not required by safety or application considerations.
Autoinflammability:	The substance or mixture is not autoinflammable.
Decomposition temperature:	300 °C
Dynamic viscosity:	Not applicable
Kinematic viscosity:	Not applicable
Explosiveness:	Not explosive Dusts might form explosive mixtures with air.
Oxidising properties:	Not oxidizing

9.2 Other information

Ignition temperature:	approx. > 400 °C
Bulk volume:	600 g/cm ³

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

See Section 10.3.

10.2 Chemical stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

In contact with dust environment, the explosive mixture is created.

10.4 Conditions to avoid

Extremes of temperature and direct sunshine. Keep away from the source of ignition – no smoking.

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10.5 Incompatible materials

Strong oxidizing substance.

10.6 Hazardous decomposition products

Decomposition products in case of fire: Smoke, styrene-monomer, butadiene, aldehydes and organic acids, carbon monoxide, carbon dioxide (CO₂).

Thermal decomposition: 300 °C

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity, orally:

LD50 oral: > 2000 mg/kg
based on available data, the classification criteria are not met
substance is slightly toxic for acute ingestion

Acute toxicity, dermally:

LD50 dermally: > 2.000 mg/kg
based on available data, the classification criteria are not met
substance is slightly toxic for acute skin contact

Acute toxicity, inhalation:

substance is slightly toxic for acute inhalation
The product may cause irritation.

Skin corrosion/irritation:

no data available
dust: may cause irritation of skin, eyes and respiratory tract
processing, thermal danger: vapours: may irritate skin, eyes and respiratory tract

Eye corrosion/irritation:

no data available
dust: may cause irritation of skin, eyes and respiratory tract
processing, thermal danger: vapours: may irritate skin, eyes and respiratory tract

Respiratory sensitization:

no data available
chemical structure doesn't imply specific precaution for this effect

Skin sensitisation:

based on available data, the classification criteria are not met
non-sensitizing

Germ cell mutagenicity/Genotoxicity:

no data available
chemical structure doesn't imply specific precaution for this effect

Carcinogenicity:

based on available data, the classification criteria are not met

Reproductive toxicity:

based on available data, the classification criteria are not met
chemical structure doesn't imply specific precaution for this effect

Effects on and through breast milk:

no data available

STOT - single exposure:

no data available
dust: may irritate skin, eyes and respiratory tract
processing, thermal danger: vapours: may irritate skin, eyes and respiratory tract

STOT - repeated exposure:

no data available
Chronic toxic effects are not expected. Product was not tested.
Statement according to similar product.
Aspiration hazard: No data available.

Other information:

According to the long-time knowledge, no inauspicious effects are known.

Symptoms:

Dust: skin irritation, eye irritation and redness
melted product may cause skin burns.
Processing, thermal hazard: Irritates eyes, respiratory tract and skin.

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SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish no warnings for aquatic toxicity

12.2 Persistence and degradability

Further Information

Biodegradation: Product is not easily biodegradable.

Degradable under UV radiation and sunshine.

Half-life in environment: ≥ 100 days (approximately)

Reactions in wastewater treatment plant

Non-toxic for organisms in wastewater.

Mechanical separation is possible in wastewater treatment plant.

12.3 Bioaccumulative potential

To prevent bioaccumulation, plastics shouldn't be liquidated in sea or another surface water.

Partition Coefficient (n-octanol/water): irrelevant

12.4 Mobility in soil

Insoluble in water.

Substance is heavier than water and it falls down.

Mobility in soil: insignificant

12.5 Results of PBT and vPvB assessment

The criteria are not met.

12.6 Other adverse effects

Do not allow penetration into soil, water or drain.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Preferred way of disposal is recycling. If compliant with local regulation, product can be landfilled or incinerated.

SECTION 14: TRANSPORT INFORMATION

According to: ADR/RID, IMDG, IATA-DGR.

14.1 UN number

Not regulated.

14.2 UN proper shipping name

Not regulated.

14.3 Transport hazard class

Not regulated.

14.4 Packing group

Not regulated.

14.5 Environmental hazards

Polluting sea: no

14.6 Special precaution for user

Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

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SECTION 15: REGULATORY INFORMATION

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

Restrictions on use:

None.

Other regulations:

No information available.

15.2 Chemical safety assessment

Not determined.

SECTION 16: OTHER INFORMATION

The information is published in the best knowledge and information of the company. The final usage of the product must be assessed by the user. The company is not responsible for any risks caused by incorrect handling or processing.