

# Safety data sheet

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BASF 3D Printing Safety data sheet  
Date / Revised: 04.03.2020  
Product: **Ultrafuse PA polyamide filament**

Version: 1.0

(11120902/SDS\_GEN\_SG/EN)

Date of print 09.01.2023

## 1. Substance/preparation and manufacturer/supplier identification

### Ultrafuse PA polyamide filament

Recommended use: 3D Printing, for industrial use only

Manufacturer/supplier:

BASF 3D Printing Solutions B.V.  
Eerste Bokslootweg 17  
7821 AT Emmen, Netherlands  
Contact address:  
BASF SEA Pte Ltd  
7 Temasek Boulevard,  
#35-01 Suntec Tower One, 038987  
SINGAPORE  
Telephone: +65 6 337-0330  
Telefax number: +65 6 334-0330  
E-mail address: carlos.mandia@basf.com

Emergency information:

Singapore Emergency Toll-Free Number:  
Telephone: 1800-723-1361  
International emergency number:  
Telephone: +49 180 2273-112

## 2. Hazard identification

Classification of the substance and mixture:  
No need for classification according to GHS criteria for this product.

Label elements and precautionary statement:

The product does not require a hazard warning label in accordance with GHS criteria.

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Other hazards which do not result in classification:  
No specific dangers known, if the regulations/notes for storage and handling are considered.

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### 3. Composition/information on ingredients

#### Chemical nature

polyamide

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### 4. First-Aid Measures

General advice:

Burns caused by molten material require hospital treatment.

If inhaled:

Assist in breathing if necessary. Keep patient calm, remove to fresh air.

On skin contact:

Burns caused by molten material require hospital treatment. Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

On contact with eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

On ingestion:

Ingestion is not likely in the available physical form. If ingested, seek medical attention.

Note to physician:

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Hazards: No hazard is expected under intended use and appropriate handling.

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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### 5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

Specific hazards:

At temperatures of > 300 °C can be emitted: carbon monoxide, hydrogen cyanide

Under special fire conditions traces of other toxic substances are possible. Formation of further decomposition and oxidation products depends upon the fire conditions.

Special protective equipment:

Wear a self-contained breathing apparatus.

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Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## 6. Accidental Release Measures

Personal precautions:

Avoid all sources of ignition: heat, sparks, open flame.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Pick up with suitable appliance and dispose of.

Use spark-proof tools and explosion-proof equipment.

Additional information: High risk of slipping due to leakage/spillage of product.

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## 7. Handling and Storage

### Handling

Provide exhaust ventilation if dust is formed.

Protection against fire and explosion:

Take precautionary measures against static discharges.

### Storage

The product in undamaged packing need not be stored separately.

Suitable materials for containers: Stainless steel 1.4301 (V2), Stainless steel 1.4401, High density polyethylene (HDPE), Low density polyethylene (LDPE), Paper/Fibreboard

Further information on storage conditions: Frost sensitive sensitive to heat

Storage stability:

Protect against moisture.

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## 8. Exposure controls and personal protection

### Components with occupational exposure limits

No occupational exposure limits known.

#### Personal protective equipment

##### Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection if ventilation is inadequate. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

##### Hand protection:

Wear gloves to prevent contact during mechanical processing and/or hot melt conditions.

##### Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

##### Body protection:

Body protection must be chosen based on level of activity and exposure.

##### General safety and hygiene measures:

Wear protective clothing to prevent contact during mechanical processing and/or hot melt conditions. Avoid inhalation of dust. Handle in accordance with good industrial hygiene and safety practice.

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## 9. Physical and Chemical Properties

Form:	filament
Colour:	white, translucent
Odour:	odourless
Odour threshold:	not applicable, odour not perceivable

pH value:	not soluble
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Melting temperature:	approx. 191 - 197 °C
onset of boiling:	not applicable

Sublimation point:	No applicable information available.
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Flash point:	not applicable, the product is a solid
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Evaporation rate:	not applicable, The product is a non-volatile solid.
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Flammability (solid/gas):	not highly flammable
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Lower explosion limit:	For solids not relevant for classification and labelling.
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Upper explosion limit:	For solids not relevant for classification and labelling.
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Ignition temperature:	> 400 °C (ASTM D1929)
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Thermal decomposition:	> 300 °C
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Self ignition:	not self-igniting
Self heating ability:	It is not a substance capable of spontaneous heating.
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating
Radioactivity:	not radioactive for transport purposes
Vapour pressure:	not applicable
Relative density:	No data available.
Relative vapour density (air):	not applicable, The product is a non-volatile solid.
Solubility in water:	insoluble
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Viscosity, dynamic:	not applicable, the product is a solid

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## 10. Stability and Reactivity

Conditions to avoid:  
Temperature: > 300 °C

Thermal decomposition: > 300 °C

Substances to avoid:  
No substances known that should be avoided.

Hazardous reactions:  
No hazardous reactions known.

Hazardous decomposition products:  
carbon monoxide, hydrogen cyanide, caprolactam

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Thermal decomposition products:  
caprolactam  
The substances/groups of substances mentioned may be released during processing.

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## 11. Toxicological Information

### **Acute toxicity**

Assessment of acute toxicity:  
Contact with molten product may cause thermal burns.

### **Irritation**

Assessment of irritating effects:  
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Experimental/calculated data:  
Serious eye damage/irritation: May cause mechanical irritation.

### **Respiratory/Skin sensitization**

Assessment of sensitization:  
The chemical structure does not suggest a sensitizing effect.

### **Germ cell mutagenicity**

Assessment of mutagenicity:  
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### **Carcinogenicity**

Assessment of carcinogenicity:  
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### **Reproductive toxicity**

Assessment of reproduction toxicity:  
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### **Developmental toxicity**

Assessment of teratogenicity:  
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### **Specific target organ toxicity (single exposure):**

Assessment of STOT single:  
Based on available Data, the classification criteria are not met.

### **Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**

Assessment of repeated dose toxicity:  
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

**Aspiration hazard**

No aspiration hazard expected.

**Other relevant toxicity information**

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

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**12. Ecological Information****Ecotoxicity**

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the structure of the product.

**Mobility**

Assessment transport between environmental compartments:

Study scientifically not justified.

**Persistence and degradability**

Assessment biodegradation and elimination (H<sub>2</sub>O):

Experience shows this product to be inert and non-degradable.

**Bioaccumulation potential**

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

Bioaccumulation potential:

The product will not be readily bioavailable due to its consistency and insolubility in water.

**Additional information**

Add. remarks environm. fate & pathway:

Due to the consistency of the product, dispersion into the environment is impossible. Therefore no negative effects on the environment may be anticipated based on the present state of knowledge.

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**13. Disposal Considerations**

Observe national and local legal requirements.

Contaminated packaging:

Dispose of in accordance with national, state and local regulations.

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## 14. Transport Information

### Domestic transport:

Not classified as a dangerous good under transport regulations

### Sea transport

IMDG

Not classified as a dangerous good under transport regulations

### Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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## 15. Regulatory Information

### Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

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## 16. Other Information

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.