

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 08.11.2018

Version: 1.1

Product: **Ultrafuse PA**

(ID no. 933757/SDS_GEN_EU/EN)

Date of print 27.09.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Ultrafuse PA

Chemical name: Ultrafuse PA

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

Recommended use: 3D Printing

1.3. Details of the supplier of the safety data sheet

Company:BASF 3D Printing Solutions B.V.
Eerste Bokslootweg 17
7821 AT Emmen, NetherlandsContact address:BASF SE
67056 Ludwigshafen
GERMANY

Telephone: +49 621 60-0

E-mail address: global.info@basf.com

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

No need for classification according to GHS criteria for this product.

2.2. Label elements

Globally Harmonized System, EU (GHS)

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

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

polyamide

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

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.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

5.2. Special hazards arising from the substance or mixture

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.

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

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

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning 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.

6.4. Reference to other sections

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Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Provide exhaust ventilation if dust is formed.

Protection against fire and explosion:

Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

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.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

8.2. Exposure controls

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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	filament	
Colour:	white, translucent	
Odour:	odourless	
Odour threshold:		
	not applicable, odour not perceivable	
pH value:		
	not soluble	
Melting temperature:	approx. 191 - 197 °C	
onset of boiling:		
	not applicable	
Sublimation point:		
	No applicable information available.	
Flash point:		
	not applicable, the product is a solid	
Evaporation rate:		
	not applicable, The product is a non-volatile solid.	
Flammability:	not highly flammable	
Flammability of Aerosol Products:		
	not applicable, the product does not form flammable aerosoles	
Lower explosion limit:		
	For solids not relevant for classification and labelling.	
Upper explosion limit:		
	For solids not relevant for classification and labelling.	
Ignition temperature:	> 400 °C	(ASTM D1929)
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 Kow):		
	not applicable	

Self ignition:	not self-igniting
Thermal decomposition:	> 300 °C
Viscosity, dynamic:	
Explosion hazard:	not applicable, the product is a solid not explosive
Fire promoting properties:	not fire-propagating

9.2. Other information

Self heating ability:	It is not a substance capable of spontaneous heating.
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Radioactivity:	not radioactive for transport purposes
Bulk density:	690 - 790 kg/m ³

SECTION 10: Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Temperature: > 300 °C

10.5. Incompatible materials

Substances to avoid:

No substances known that should be avoided.

10.6. Hazardous decomposition products

Hazardous decomposition products:
carbon monoxide, hydrogen cyanide, ε-caprolactam

Thermal decomposition products:

ε-caprolactam

The substances/groups of substances mentioned may be released during processing.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

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.

SECTION 12: Ecological Information

12.1. Toxicity

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.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

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

12.3. Bioaccumulative 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.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Study scientifically not justified.

12.5. Results of PBT and vPvB assessment

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The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. 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.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

Contaminated packaging:

Packs must be completely emptied.

Completely emptied packagings can be given for recycling.

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable

Special precautions for user None known

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

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

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information

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

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required

SECTION 16: Other Information

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

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

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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.

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