

Safety Data Sheet

Ultrafuse PA polyamide filament

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Version: 2.1

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(11120902/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Ultrafuse PA polyamide filament

Recommended use of the chemical and restriction on use

Recommended use*: 3D Printing; for industrial use only

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF 3D Printing Solutions B.V.
Eerste Bokslootweg 17
7821 AT Emmen, Netherlands

Contact address:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932
USA
Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: Polymer

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

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

Label elements

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

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Hazards not otherwise classified

Labeling of special preparations (GHS):

This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size. UNDER HOT MELT PROCESSING CONDITIONS, WEAR PERSONAL PROTECTIVE EQUIPMENT TO PREVENT THERMAL BURNS.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Under the referenced regulation, this product does not contain any components classified for health hazards above the relevant cut off value.

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

Burns caused by molten material require hospital treatment.

If inhaled:

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

If on skin:

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

If in 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.

If swallowed:

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

Most important symptoms and effects, both acute and delayed

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.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

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

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5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, hydrogen cyanide, can be emitted at > 300 °C
Under special fire conditions traces of other toxic substances are possible. Formation of further decomposition and oxidation products depends upon the fire conditions.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:

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

6. Accidental release measures

Further accidental release measures:
High risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

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.

7. Handling and Storage

Precautions for safe handling

Provide exhaust ventilation if dust is formed.

Protection against fire and explosion:
Take precautionary measures against static discharges.

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

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Storage stability:
Protect against moisture.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) particulate respirator. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

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.

9. Physical and Chemical Properties

Form:	filament
Odour:	odourless
Odour threshold:	not applicable, odour not perceivable
Colour:	white, translucent
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
Flammability:	not highly flammable
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Autoignition:	> 400 °C (ASTM D1929)
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Vapour pressure:	not applicable

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Relative density:	No data available.
Vapour density:	not applicable, The product is a non-volatile solid.
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Self-ignition temperature:	not self-igniting
Thermal decomposition:	> 300 °C May decompose if overheated and/or subjected to prolonged heating.
Viscosity, dynamic:	not applicable, the product is a solid
Solubility in water:	insoluble
Evaporation rate:	not applicable, The product is a non-volatile solid.

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

not fire-propagating

Chemical stability

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

Possibility of hazardous reactions

No hazardous reactions known.

Conditions to avoid

Temperature: > 300 degrees Celsius

Incompatible materials

No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, hydrogen cyanide, caprolactam

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

Thermal decomposition:

> 300 °C

May decompose if overheated and/or subjected to prolonged heating.

11. Toxicological information

Primary routes of exposure

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Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Contact with molten product may cause thermal burns. The resin in pelleted form poses a low hazard.

Inhalation

Type of value: ATE
Value: > 5.0000 mg/l
Determined for dust

Dermal

Type of value: ATE
Value: > 5,000 mg/kg

Assessment other acute effects

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

Irritation / corrosion

Assessment of irritating effects: Thermal decomposition products of the substance can irritate the eyes, skin, and respiratory tract.

Sensitization

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

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

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.

Genetic toxicity

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.

Teratogenicity

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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.

Other 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.

Symptoms of Exposure

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.

12. Ecological Information

Toxicity

Aquatic 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.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

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

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.

Mobility in soil

Assessment transport between environmental compartments

Study scientifically not justified.

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.

13. Disposal considerations

Waste disposal of substance:

Observe national and local legal requirements.

Container disposal:

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

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14. Transport Information

Land transport
USDOT

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

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

NFPA Hazard codes:

Health: 1 Fire: 1 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:

BASF 3D Printing NA Product Regulations
SDS Prepared on: 2019/11/15

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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

END OF DATA SHEET