Safety data sheet

1. Identification

Product identifier

Ultrafuse® PLA Tough Natural
Recommended use: 3D Printing

Details of the supplier of the safety data sheet

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

Telephone: + 31 591 820 389
E-mail address: sales@basf-3dps.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

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

Label elements

Globally Harmonized System (GHS)

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

Other hazards

According to UN GHS criteria

The product may cause burns, if handled in the melted state.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

Preparation based on: Polymer, additives

Hazardous ingredients (GHS)
According to UN GHS criteria

No particular hazards known.

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. If symptoms persist, seek medical advice.

On skin contact:
Wash thoroughly with soap and water If irritation develops, seek medical attention. Burns caused by molten material require hospital treatment.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, seek medical attention.

On ingestion:
Rinse mouth immediately with water. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

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

Indication of any immediate medical attention and special treatment needed

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

5. Fire-Fighting Measures

Extinguishing media

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

Special hazards arising from the substance or mixture

carbon oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
Dust can form an explosive mixture with air. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Avoid dispersal of dust in the air (e.g. by clearing dusty surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

Personal precautions, protective equipment and emergency procedures

No special precautions necessary.

Environmental precautions

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

For small amounts: Sweep/shovel up.
For large amounts: Sweep/shovel up.
Dispose of absorbed material in accordance with regulations. Avoid raising dust.

7. Handling and Storage

Precautions for safe handling

Avoid inhalation of dusts/mists/vapours. Ensure adequate ventilation. Provide suitable exhaust ventilation at the drying process and in the area surrounding the melt outlet of processing machines. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Avoid the formation and deposition of dust.

Protection against fire and explosion:

The product is not an oxidizer, not self-combustible and not explosive. Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Avoid deposition of dust. Avoid extreme heat.

Storage stability:
Protect against moisture.

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.

8. Exposure Controls/Personal Protection

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:
Use additional heat protection gloves when handling hot molten masses (EN 407), e.g. of textile or leather.

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

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
Wear protective clothing to prevent contact during mechanical processing and/or hot melt conditions. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. When using, do not eat, drink or smoke.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	filament
Colour:	beige to light brown
Odour:	odourless
Odour threshold:	
	not applicable, odour not perceivable

pH value:	not determined
Melting point:	177 °C
Boiling point:	not determined
Flash point:	not determined
Evaporation rate:	The product is a non-volatile solid.
Flammability:	not determined
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Ignition temperature:	not determined
Vapour pressure:	The product is a non-volatile solid.
Density:	1,22 g/cm3 (20 °C, 1.013 hPa)
Relative vapour density (air):	The product is a non-volatile solid.
Solubility in water:	not determined
Partitioning coefficient n-octanol/water (log Kow):	not determined
Self ignition:	not self-igniting
Thermal decomposition:	> 230 °C
Viscosity, dynamic:	not applicable, the product is a solid
Viscosity, kinematic:	not applicable, the product is a solid
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating

Other information

Self heating ability:	It is not a substance capable of spontaneous heating.
Bulk density:	not determined

10. Stability and Reactivity

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

Corrosion to metals: No corrosive effect on metal.

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

Possibility of hazardous reactions
Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

Conditions to avoid
Temperature: > 230 °C
Avoid all sources of ignition: heat, sparks, open flame.

Incompatible materials

Substances to avoid:
oxidizing agents, strong bases

Hazardous decomposition products

Possible thermal decomposition products:
aldehydes, carbon oxides, toxic gases/vapours

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. Contact with molten product may cause thermal burns.

Experimental/calculated data:
LD50 rat (oral): > 5.000 mg/kg

(by inhalation):The inhalation of dusts represents a potential acute hazard.

LD50 rabbit (dermal): > 2.000 mg/kg

Irritation

Assessment of irritating effects:
Not irritating to eyes and skin. May cause mechanical irritation.

Respiratory/Skin sensitization

Assessment of sensitization:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Assessment of mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment of carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity

Assessment of reproduction toxicity:
Based on available data, the classification criteria are not met.

Developmental toxicity

Assessment of teratogenicity:
Based on available data, the classification criteria are not met.

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 available data, the classification criteria are not met.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Based on available data, the classification criteria are not met. At the present state of knowledge, no negative ecological effects are expected.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
No data available concerning biodegradation and elimination.

Bioaccumulative potential

Assessment bioaccumulation potential:
The product has not been tested.

Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: Adsorption to solid soil phase is expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria.

Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

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 treatment methods

Dispose of in accordance with national, state and local regulations.
Contact specialized companies about recycling.

Contaminated packaging:
Dispose of in accordance with national, state and local regulations.
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number or ID 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 or ID 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	None known

user

Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number or ID 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 or ID 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 or ID 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

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

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

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

16. Other Information

Any other intended applications should be discussed with the manufacturer.

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.

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