

# Safety data sheet

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BASF 3D Printing Safety data sheet according to UN GHS 4th rev. Date / Revised: 21.12.2022 Product: **Ultrafuse® TPU 64D pink** 

Version: 1.1

(ID no. 11124425/SDS\_GEN\_00/EN)

Date of print 10.01.2023

## 1. Identification

**Product identifier** 

# Ultrafuse® TPU 64D pink

Recommended use: 3D Printing

## Details of the supplier of the safety data sheet

<u>Company:</u> 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.

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#### Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

#### 3. Composition/Information on Ingredients

#### **Substances**

Not applicable

#### **Mixtures**

Chemical nature

Polymer based on: polyurethane, stabilizing agents, 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.

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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

## 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. Vacuum up spilled product. Reclaim for processing if possible. Ensure adequate ventilation.

## 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.

Protection against fire and explosion: The product is not an oxidizer, not self-combustible and not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Paper/Fibreboard

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Further information on storage conditions: Avoid extreme heat. Protect against moisture.

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

#### **Control parameters**

Components with occupational exposure limits

13463-67-7: Titanium dioxide

#### **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: Colour: Odour: Odour threshold:	filament pink odourless
	not applicable, odour not perceivable

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Date of print 10.01.2023 pH value: 6 - 8 (20 °C) softening temperature: > 120 °C boiling temperature: The product is a non-volatile solid. Flash point: not applicable, the product is a solid Evaporation rate: The product is a non-volatile solid. Flammability: Not a flammable solid according to UN transport regulations division 4.1 and GHS chapter 2.7. Lower explosion limit: For solids not relevant for classification and labelling. Upper explosion limit: For solids not relevant for classification and labelling. > 400 °C Ignition temperature: Vapour pressure: not determined Density: approx. 1,1 - 1,2 g/cm3 (20 °C) Relative density: approx. 1,1 - 1,2 (20 °C) Relative vapour density (air): The product is a non-volatile solid. Solubility in water: insoluble Partitioning coefficient n-octanol/water (log Kow): not applicable for mixtures Self ignition: not self-igniting Thermal decomposition: No decomposition if stored and handled as prescribed/indicated. > 230 °C Thermal decomposition above the indicated temperature is possible. Prolonged thermal loading can result in products of degradation being given off. Explosion hazard: not explosive Fire promoting properties: not fire-propagating Other information Self heating ability: It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2. Bulk density: 500 - 700 kg/m3

## 10. Stability and Reactivity

#### Reactivity

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

(20 °C)

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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

No hazardous reactions when stored and handled according to instructions.

#### **Conditions to avoid**

No conditions to avoid anticipated.

#### Incompatible materials

Substances to avoid: oxidizing agents

#### Hazardous decomposition products

Hazardous decomposition products: Prolonged thermal loading can result in products of degradation being given off., monomers, gases/vapours, oxides, hydrocarbons, cyclic low molecular weight oligomers

## **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.

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

(dermal):No applicable information available.

#### 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

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Assessment of carcinogenicity:

The chemical structure does not suggest a specific alert for such an effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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

#### Other relevant toxicity information

The product has not been tested. The statement has been derived from the properties of the individual components.

## **12. Ecological Information**

#### 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 substances/products of a similar structure or composition.

#### Persistence and degradability

Assessment biodegradation and elimination (H2O): Poorly biodegradable.

Elimination information: Poorly biodegradable.

#### **Bioaccumulative potential**

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Assessment bioaccumulation potential: Does not significantly accumulate in organisms.

#### Mobility in soil

Assessment transport between environmental compartments: Adsorption in soil: Due to the product characteristics the test is impossible.

## 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 Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

#### **Additional information**

Adsorbable organically-bound halogen (AOX): This product contains no organically-bound halogen.

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.

Other ecotoxicological advice:

The ecotoxic effect of the product has not been tested. The information on this was derived from products of similar structure or composition.

## **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

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	Bate of plant role fi202
	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	
RID	

Not classified as a dangerous good under transport regulations

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

#### Inland waterway transport ADN

user:

	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

Transport in inland waterway vessel Not evaluated

#### Sea transport

#### IMDG

UN number or ID number: UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards: Special precautions for user

Not classified as a dangerous good under transport regulations Not applicable Not applicable Not applicable Not applicable Not applicable None known

#### Air transport

IATA/ICAO

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Date of print 10.01.2023

Date of print 10.01.202Not classified as a dangerous good under transport regulationsUN number or ID numberNot applicableUN proper shipping name:Not applicableTransport hazard class(es):Not applicablePacking group:Not applicableEnvironmental hazards:Not applicableSpecial precautions forNone known

## Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

## 15. Regulatory Information

user

# 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. 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 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.