

Safety data sheet

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BASF 3D Printing Safety data sheet

Date / Revised: 21.04.2020

Product: **Ultrafuse® TPU 64D natural**

Version: 1.1

(11124420/SDS_GEN_SG/EN)

Date of print 10.01.2023

1. Substance/preparation and manufacturer/supplier identification

Ultrafuse® TPU 64D natural

Recommended use: 3D Printing, for industrial use only

Manufacturer/supplier:

BASF 3D Printing Solutions B.V.

Eerste Bokslootweg 17

7821 AT Emmen, Netherlands

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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.

3. Composition/information on ingredients

Chemical nature

Polymer based on: polyurethane, stabilizing agents, additives

No particular hazards known.

4. First-Aid Measures

General advice:
Remove contaminated clothing.

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

On skin contact:
Wash thoroughly with soap and water Burns caused by molten material require hospital treatment. 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:
Keep patient calm, remove to fresh air. Immediate medical attention required.

Note to physician:
Symptoms: (Further) symptoms and / or effects are not known so far
Hazards: No hazard is expected under intended use and appropriate handling.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray, foam, dry powder

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

Special protective equipment:
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

Personal precautions:
No special precautions necessary.

Environmental precautions:
Discharge into the environment must be avoided.

Methods for cleaning up or taking 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

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.

Storage

Segregate from foods and animal feeds.

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

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

Storage stability:
Protect against moisture.

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)

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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.

9. Physical and Chemical Properties

Form: filament
Colour: transparent
Odour: odourless
Odour threshold: not applicable

pH value: 6 - 8
(20 °C)

softening temperature: > 120 °C
boiling temperature: The product is a non-volatile solid.

Flash point: not applicable

Evaporation rate: The product is a non-volatile solid.

Flammability (solid/gas): not flammable

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

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

> 230 °C
Thermal decomposition above the indicated temperature is possible.

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Self ignition: Prolonged thermal loading can result in products of degradation being given off.
not self-igniting

Self heating ability: It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.

Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

Vapour pressure:
not applicable

Density: approx. 1.1 - 1.2 g/cm³
(20 °C)

Relative density: approx. 1.1 - 1.2
(20 °C)

Bulk density: 500 - 700 kg/m³
(20 °C)

Relative vapour density (air):
not applicable

Solubility in water: insoluble
Partitioning coefficient n-octanol/water (log Pow):
not applicable

Viscosity, dynamic:
not applicable

10. Stability and Reactivity

Conditions to avoid:
No conditions to avoid anticipated.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Thermal decomposition: > 230 °C
Thermal decomposition above the indicated temperature is possible.

Thermal decomposition: Prolonged thermal loading can result in products of degradation being given off.

Substances to avoid:
oxidizing agents

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:

No hazardous reactions when stored and handled according to instructions.

Thermal decomposition products:

Prolonged thermal loading can result in products of degradation being given off.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:

Contact with molten product may cause thermal burns.

Experimental/calculated data:

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

(dermal): No applicable information available.

Irritation

Experimental/calculated data:

Skin corrosion/irritation: May cause mechanical irritation.

Serious eye damage/irritation: May cause mechanical irritation.

Respiratory/Skin sensitization

Assessment of sensitization:

The chemical structure does not suggest a sensitizing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Germ cell mutagenicity

Assessment of mutagenicity:

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.

Carcinogenicity

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:

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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.

Developmental toxicity

Assessment of teratogenicity:

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.

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

Assessment of repeated dose toxicity:

Repeated exposure to the substance by dermal administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by inhalative administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by oral administration leads to effects similar to those found after single exposure. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration hazard

No aspiration hazard expected.

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

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 substances/products of a similar structure or composition.

Mobility

Assessment transport between environmental compartments:

Due to the product characteristics the test is impossible.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Poorly biodegradable.

Elimination information:

Poorly biodegradable.

Bioaccumulation potential

Assessment bioaccumulation potential:
Does not significantly accumulate in organisms.

Other adverse effects

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

Additional information

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

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

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

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

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.

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.