

Safety data sheet

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BASF 3D Printing Safety data sheet

Date / Revised: 04.03.2020

Product: **Ultrafuse® BVOH polyvinyl alcohol filament**

Version: 1.0

(11120948/SDS_GEN_SG/EN)

Date of print 02.11.2023

1. Substance/preparation and manufacturer/supplier identification

Ultrafuse® BVOH polyvinyl alcohol filament

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

3. Composition/information on ingredients

Chemical nature

polymer blend based on: alcohols

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:
dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Water jet can rapidly spread fire.

Specific hazards:
harmful vapours, carbon oxides

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Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.

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. Pack in tightly closed containers for disposal.

Dispose of contaminated material as waste according to item 13.

Additional information: High risk of slipping due to leakage/spillage of product.

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. 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.

Storage

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Do not store in steel or stainless steel containers; polyethylene is the preferred material.

Storage stability:

Avoid extreme heat.

Avoid freezing.

Frost sensitive

The packed product will be damaged by high temperatures.

8. Exposure controls and personal protection

Components with occupational exposure limits

No occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Suitable respiratory protection for higher concentrations or long-term effect: (Particle filter EN 143 P1)

Hand protection:

Chemical resistant protective gloves (EN 374)

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:

Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form:	filament	
Colour:	white to light yellow	
Odour:	vinegar-like	
Odour threshold:	not determined	
pH value:	5 - 7	
melting range:	150 - 300 °C	
Boiling point:	The product is a non-volatile solid.	
Flash point:	> 200 °C	(closed cup)
Evaporation rate:	The product is a non-volatile solid.	
Flammability (solid/gas):	not highly flammable	
Lower explosion limit:	For solids not relevant for classification and labelling.	

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Upper explosion limit:	For solids not relevant for classification and labelling.
Ignition temperature:	440 °C
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated. Prolonged thermal loading can result in products of degradation being given off.
Self ignition:	not self-igniting
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating
Vapour pressure:	No data available.
Relative density:	Study does not need to be conducted.
Bulk density:	approx. 1,140 kg/m ³
Relative vapour density (air):	The product is a non-volatile solid.
Solubility in water:	completely soluble
Solubility (qualitative) solvent(s):	N,N-dimethylformamide, dimethyl sulfoxide soluble
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures
Viscosity, dynamic:	not applicable, the product is a solid

10. Stability and Reactivity

Conditions to avoid:

Avoid dust formation. Avoid deposition of dust.

Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated. Prolonged thermal loading can result in products of degradation being given off.
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Substances to avoid:
oxidizing agents

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:

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

Thermal decomposition products:

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

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation

Assessment of irritating effects:

May cause slight irritation to the eyes. The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:

Skin corrosion/irritation: May cause mechanical irritation.

Serious eye damage/irritation: May cause slight irritation to the eyes.

Respiratory/Skin sensitization

Assessment of sensitization:

No applicable information available.

Germ cell mutagenicity

Assessment of mutagenicity:

No applicable information available.

Carcinogenicity

Assessment of carcinogenicity:

No applicable information available.

Reproductive toxicity

Assessment of reproduction toxicity:

No applicable information available.

Developmental toxicity

Assessment of teratogenicity:

No applicable information available.

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

Assessment of repeated dose toxicity:

No applicable information available.

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.

Mobility

Assessment transport between environmental compartments:

Study technically not feasible.

Due to the product characteristics the test is impossible.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Product is not expected to be readily biodegradable.

Bioaccumulation potential

Assessment bioaccumulation potential:

The product has not been tested.

Other adverse effects

Adsorbable organically-bound halogen (AOX):

This product contains no organically-bound halogen.

13. Disposal Considerations

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

Contaminated packaging:

Completely emptied packagings can be given for recycling.

14. Transport Information

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport

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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

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.