1. Identification

Product identifier

**Ultrafuse® ABS Fusion+ 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. Burns caused by molten material require hospital treatment. If irritation develops, seek medical attention.

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.
5. Fire-Fighting Measures

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

**Special hazards arising from the substance or mixture**
- Acrylonitrile, Styrene, fumes/smoke, nitrogen oxides, 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**
- Dispose of in compliance with the environmental protection requirements. 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 extreme heat. Avoid deposition of dust.

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**

- 100-42-5: Styrene
- 107-13-1: Acrylonitrile

**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: yellow tint
Odour: odourless
Odour threshold: not applicable, odour not perceivable
pH value: not soluble
Melting point: > 114 °C
Boiling point: not applicable
Flash point: not applicable, the product is a solid
Evaporation rate: The product is a non-volatile solid.
Flammability: not flammable
Lower explosion limit: For solids not relevant for classification and labelling.
Upper explosion limit: For solids not relevant for classification and labelling.
Vapour pressure: (20 °C) negligible
Relative vapour density (air): The product is a non-volatile solid.
Solubility in water: negligible
Partitioning coefficient n-octanol/water (log Kow): not applicable for mixtures
Self ignition: not self-igniting

Thermal decomposition: > 300 °C
Viscosity, dynamic: not applicable, the product is a solid
Viscosity, kinematic: not applicable, the product is a solid

Explosion hazard: Product is not explosive, however a dust explosion could result from an air / dust mixture.
Fire promoting properties: not fire-propagating

Other information
Self heating ability: It is not a substance capable of spontaneous heating.

Bulk density: 1.075 kg/m³
(20 °C)
Miscibility with water: immiscible

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**

No hazardous reactions when stored and handled according to instructions.

**Conditions to avoid**

Avoid extreme temperatures. Avoid UV-light and other radiation with high energy.

**Incompatible materials**

Substances to avoid:

- oxidizing agents

**Hazardous decomposition products**

Thermal decomposition products:

- Acrylonitrile
- Styrene
- Nitrogen oxides, carbon oxides

**11. Toxicological Information**

**Information on toxicological effects**

**Acute toxicity**

Assessment of acute toxicity:

- Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Contact with molten product may cause thermal burns.

**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.
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

No aspiration hazard expected.

Other relevant toxicity information

| The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
| The product has not been tested. The statement has been derived from the structure of the product. There is a high probability that the product is not acutely harmful to aquatic organisms.

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**


**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**

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**

<table>
<thead>
<tr>
<th>ADR</th>
<th>Not classified as a dangerous good under transport regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number or ID number:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN proper shipping name:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Transport hazard class(es):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>None known</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RID</th>
<th>Not classified as a dangerous good under transport regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number or ID number:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN proper shipping name:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
### Transport hazard class(es)

- Not applicable

### Packing group

- Not applicable

### Environmental hazards

- Not applicable

### Special precautions for user

- None known

#### Inland waterway transport

- ADN

- Not classified as a dangerous good under transport regulations

#### Transport in inland waterway vessel

- Not evaluated

#### 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

#### 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

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.