

# Safety Data Sheet

## Ultrafuse® PLA Tough Natural

Revision date : 2023/07/10

Version: 1.0

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(1106972/SDS\_GEN\_US/EN)

### 1. Identification

**Product identifier used on the label**

**Ultrafuse® PLA Tough Natural**

**Recommended use of the chemical and restriction on use**

Recommended use\*: 3D Printing

Unsuitable for use: Uses other than recommended

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

**Details of the supplier of the safety data sheet**

Company:

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

Contact address:

BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932  
USA  
Telephone: +1 973 245-6000

**Emergency telephone number**

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

**Other means of identification**

Chemical family: Polymer

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### 2. Hazards Identification

**According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

**Classification of the product**

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

**Label elements**

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

### Hazards not otherwise classified

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

#### Labeling of special preparations (GHS):

This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size. UNDER HOT MELT PROCESSING CONDITIONS, WEAR PERSONAL PROTECTIVE EQUIPMENT TO PREVENT THERMAL BURNS.

## 3. Composition / Information on Ingredients

### According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Under the referenced regulation, this product does not contain any components classified for health hazards above the relevant cut off value.

## 4. First-Aid Measures

### Description of 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.

#### **If on skin:**

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

#### **If in eyes:**

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

#### **If swallowed:**

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

#### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no

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known specific antidote.

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### 5. Fire-Fighting Measures

#### Extinguishing media

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

#### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
Vapors/fumes may contain traces of combustible substances.

#### Advice for fire-fighters

Protective equipment for fire-fighting:  
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

#### Further information:

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

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### 6. Accidental release measures

#### Further 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

Wear suitable personal protective clothing and equipment. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

#### Environmental precautions

Do not allow to enter soil, waterways or waste water channels.

Dispose of in compliance with the environmental protection requirements.

#### 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. Avoid raising dust. Nonsparking tools should be used. After decontamination, spill area can be washed with water.

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### 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.

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Protection against fire and explosion:

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. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

### Conditions for safe storage, including any incompatibilities

Segregate from oxidizing agents.

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

Storage stability:

Protect against moisture.

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## 8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

### Advice on system design:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

### Personal protective equipment

#### Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

#### Hand protection:

Wear gloves to prevent contact during mechanical processing and/or hot melt conditions.

#### Eye protection:

Safety glasses with side-shields. Wear splash goggles to protect from hot molten substance/product.

#### Body protection:

Standard work clothes and shoes.

#### General safety and hygiene measures:

Avoid inhalation of dust. Wear protective clothing to prevent contact during mechanical processing and/or hot melt conditions. Wash soiled clothing immediately.

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## 9. Physical and Chemical Properties

Form:	filament
Odour:	odourless

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Odour threshold:	not applicable, odour not perceivable
Colour:	beige to light brown
pH value:	not determined
Melting point:	177 °C
Boiling point:	not determined
Flash point:	not determined
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.
Autoignition:	not determined
Vapour pressure:	The product is a non-volatile solid.
Density:	1.22 g/cm <sup>3</sup> ( 20 °C, 1,013 hPa)
Bulk density:	not determined
Vapour density:	The product is a non-volatile solid.
Partitioning coefficient n-octanol/water (log Pow):	not determined
Self-ignition temperature:	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
Solubility in water:	not determined
Evaporation rate:	The product is a non-volatile solid.

## 10. Stability and Reactivity

### Reactivity

Corrosion to metals:  
No corrosive effect on metal.

Oxidizing properties:  
Not an oxidizer.

### 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 degrees Celsius  
Avoid all sources of ignition: heat, sparks, open flame.

### Incompatible materials

oxidizing agents, strong bases

### Hazardous decomposition products

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

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Thermal decomposition:  
> 230 °C

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## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### Acute toxicity

Assessment of acute toxicity: Inhalation of particulates may cause respiratory tract irritation. Ingestion may cause gastrointestinal disturbances. Contact with molten product may cause thermal burns. The resin in pelleted form poses a low hazard.

#### Oral

Type of value: LD50  
Species: rat  
Value: > 5,000 mg/kg

#### Inhalation

The inhalation of dusts represents a potential acute hazard.

#### Dermal

Type of value: LD50  
Species: rabbit  
Value: > 2,000 mg/kg

#### Assessment other acute effects

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

#### Irritation / corrosion

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

#### Sensitization

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

#### Aspiration Hazard

not applicable

### Chronic Toxicity/Effects

#### Repeated dose toxicity

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

#### Genetic toxicity

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

#### Carcinogenicity

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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.

### Teratogenicity

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

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## 12. Ecological Information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity:

At the present state of knowledge, no negative ecological effects are expected.

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

### Persistence and degradability

#### Assessment biodegradation and elimination (H<sub>2</sub>O)

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 to solid soil phase is expected.

### 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.

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## 13. Disposal considerations

### Waste disposal of substance:

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund'). Incinerate in a licensed facility. Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

### Container disposal:

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.

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### 14. Transport Information

**Land transport**  
USDOT

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

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### 15. Regulatory Information

**Federal Regulations**

**Registration status:**

Chemical TSCA, US released / listed

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

**NFPA Hazard codes:**

Health: 1 Fire: 1 Reactivity: 0 Special:

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### 16. Other Information

**SDS Prepared by:**

BASF 3D Printing NA Product Regulations

SDS Prepared on: 2023/07/10

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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Any other intended applications should be discussed with the manufacturer.

END OF DATA SHEET