

Safety data sheet

Page: 1/10

BASF 3D Printing Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

1. Identification

Product identifier

Ultrasint® PA11 polyamide powder

Recommended use: 3D Printing

Details of the supplier of the safety data sheet

Company:

BASF 3D Printing Solutions GmbH
Speyerer Str. 4
69115 Heidelberg, Germany

Telephone: +49 6221 67417 900
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.

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

Other hazards

According to UN GHS criteria

Dust can form an explosive mixture with air. The product may cause burns, if handled in the melted state.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

polyamide

Hazardous ingredients (GHS)

According to UN GHS criteria

No particular hazards known.

4. First-Aid Measures

Description of first aid measures

Change contaminated clothing and shoes. If symptoms persist, seek medical advice. Remove contaminated clothing immediately and clean before re-use or dispose it if necessary.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention. Skin contact with hot molten substance/product may cause thermal burns.

On contact with eyes:

Remove contact lenses, if present. Seek medical attention. Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink 200-300 ml of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

Hazards: No hazards anticipated.

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, dry powder, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:

water jet

Special hazards arising from the substance or mixture

carbon oxides, ammonia oxides, toxic gases/vapours

The substances/groups of substances mentioned can be released in case of fire. Dust explosion hazard.

Advice for fire-fighters

Special protective equipment:

Put on breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Dust can form an explosive mixture with air.

6. Accidental Release Measures

High risk of slipping due to leakage/spillage of product. Dust can form an explosive mixture with air.

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Keep away from sources of ignition. Avoid contact with the skin, eyes and clothing. Information regarding personal protective measures, see section 8. Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Take up mechanically and collect in suitable container (adequately labelled) for disposal.

7. Handling and Storage

Precautions for safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin and eyes. Handle with care - avoid bumps, friction and impact.

Protection against fire and explosion:

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

Where required Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Avoid dust formation.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Low density polyethylene (LDPE)

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

Protect from temperatures above: 60 °C

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

The release and quantity of the stated substance is dependent on the processing conditions.

Particles, not otherwise specified, inhalable
Particles, not otherwise specified, respirable

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:

The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties).

Follow manufacturer's advice on use, storage, maintenance and replacement of gloves.

Protective gloves are recommended in case of extensive contact or in case of particular sensitivity against skin contact.

Eye protection:

In order to satisfy general industrial hygiene rules safety glasses with side-shields (e.g. EN 166) are recommended.

Body protection:

Antistatic safety shoes

General safety and hygiene measures

Wearing of closed work clothing is recommended. Avoid inhalation of dusts. Avoid contact with skin and eyes. Keep away from food, drink and animal feeding stuffs. When using do not eat or drink.

When using do not smoke. Take off immediately all contaminated clothing. Avoid inhalation of dusts. Hands and/or face should be washed before breaks and at the end of the shift.

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	powder
Colour:	white
Odour:	odourless
Odour threshold:	not applicable, odour not perceivable
pH value:	insoluble
melting range:	approx. 178 - 210 °C
decomposition point:	> 350 °C
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.
Ignition temperature:	> 450 °C
Vapour pressure:	not applicable
Density:	approx. 1,01 g/cm ³ (20 °C)
Relative density:	1,01
Relative vapour density (air):	The product is a non-volatile solid.
Solubility in water:	insoluble (20 °C)
Partitioning coefficient n-octanol/water (log Kow):	not applicable
Self ignition:	not self-igniting
Thermal decomposition:	not determined
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

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

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

Radioactivity:

not radioactive for transport purposes

Bulk density: 530 kg/m³

Grain size distribution 19,2 µm

(D10, Volumetric Distribution, other (measured))

43,4 µm

(D50, Volumetric Distribution, other (measured))

78,5 µm

(D90, Volumetric Distribution, other (measured))

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

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

Dust explosion hazard.

Conditions to avoid

Temperature: 60 °C

Avoid all sources of ignition: heat, sparks, open flame. Avoid humidity. Avoid direct contact with water. Avoid dust formation.

Incompatible materials

Substances to avoid:

strong acids, oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:

toxic gases/vapours, hydrogen cyanide

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Contact with molten product may cause thermal burns.

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

Irritation

Assessment of irritating effects:

May cause slight irritation to the skin.

Respiratory/Skin sensitization

Assessment of sensitization:

A sensitizing effect on particularly sensitive individuals cannot be excluded.

Germ cell mutagenicity

Assessment of mutagenicity:

No data was available concerning mutagenic activity.

Carcinogenicity

Assessment of carcinogenicity:

No data was available concerning carcinogenic activity.

Reproductive toxicity

Assessment of reproduction toxicity:

No reliable data are available concerning reproduction toxicity.

Developmental toxicity

Assessment of teratogenicity:

No reliable data was available concerning teratogenicity.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

Assessment of repeated dose toxicity:

After repeated exposure the prominent effect is local irritation. Repeated inhalative uptake of particles/dust reaching the alveoli may cause damage to the lungs. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

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.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

In accordance with the required stability the product is not readily biodegradable.

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential:

Does not significantly accumulate in organisms.

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

Bioaccumulation potential:

The product will not be readily bioavailable due to its consistency and insolubility in water.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Study scientifically not justified.

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.

13. Disposal Considerations

Waste treatment methods

Observe national and local legal requirements.

Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

Contaminated packaging:
Packs must be completely emptied.
Completely emptied packagings can be given for recycling.

14. Transport Information

Land transport

ADR

	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 user	None known

RID

	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 user	None known

Inland waterway transport

ADN

	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 user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

 Safety data sheet according to UN GHS 4th rev.

Date / Revised: 05.05.2023

Version: 4.0

Product: **Ultrasint® PA11 polyamide powder**

(ID no. 30774012/SDS_GEN_00/EN)

Date of print 02.10.2023

	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 user	None known

Air transport

IATA/ICAO

	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 user	None known

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.