

## Material safety data sheet

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### ALUMIDE®

#### General

This data sheet corresponds to the instructions in the 91/155/EEC directive, including all currently valid amendments.

Revised on: 10.12.2007

Replaces version of: 01.09.2003

#### 1 Identification of the substance / preparation and of the company / undertaking

Product name: ALUMIDE®

Supplier: EOS GmbH - Electro Optical Systems

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#### 2 Composition / information on ingredients

Chemical characterisation: Polylaurinlactam (polyamide 12) and aluminium grit (CAS No. 7429-90-5)

Additional information: The parent material of the polymer are contained in the EINECS.

#### 3 Hazards identification

Can create explosive gasses together with water and/or chemicals.

Hazards designation is not applicable.

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Special hazards for humans and the environment are not applicable.

### 4 First aid measures

Inhalation:	If vapours are inhaled due to thermal decomposition of the product, bring those affected to fresh air. Contact a physician.
Skin contact:	Upon contact with the skin, immediately wash with soap and water.
Eye contact:	In case of contact with the eyes, rinse thoroughly with plenty of water and consult a physician.
Ingestion:	In case of sustained ailments, seek medical attention.

### 5 Fire-fighting measures

General:	Do not swirl up dust. Do not extinguish with water or CO <sub>2</sub> !
Special exposure hazards arising from fire-fighting:	In case of fire, the following can be released: Carbon monoxide, carbon dioxide, nitrogen oxides, organic decomposition products. Under certain combustion circumstances, traces of other poisonous products cannot be excluded.
Suitable extinguishing media:	Dry inert bulk material, e.g., sand (air exclusion) or fire-class D solid extinguishing-agent

### 6 Accidental release measures

Personal precautions:	Prevent the formation of dust. Keep away from ignition sources. Wear protective clothing.
Methods for cleaning up:	Pick-up mechanically. Protect from water.

### 7 Handling and storage

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Handling:	Prevent the formation of dust. In case of thermal processing, provide extraction of the vapours or sufficient ventilation.
Fire and explosion protection:	Take measures against electrostatic charging. Keep away from ignition sources (during occurrence of dusts). Do not smoke! Dust and air can create explosive mixtures!
Storage:	Protect from moisture. No special precautions required.

### 8 Exposure controls / personal protection

General dust limit:	Limits:	3 mg/m <sup>3</sup> MAK (TRGS 900)
	Type of exposure:	alveolar fraction
	Limits:	10 mg/m <sup>3</sup> MAK (TRGS 900)
	Type of exposure:	inhalable fraction
Acute exposure dust limit:	limit factor 2	
	Type of exposure:	substances with resorptive effect
Workplace hygiene:	Do not inhale dusts. Do not eat, drink, smoke, or take snuff. Wash hands with soap and water before breaks.	
Respiratory protection:	In case the MAK values are exceeded, dust filter-class P1 respirators are required.	
Hand protection:	Preventive hand protection through the use of hand protection agents (degreased film-forming substances, O/W emulsions) is recommended. In case of thermal processing, heat insulating protective gloves are to be used.	
Eye protection:	Safety glasses	
Skin protection:	Work clothes	

### 9 Physical and chemical properties

Form:	Grit form
Colour:	Grey
Odour:	Odourless

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Melting temperature:	> 80 °C
Boiling temperature:	Not applicable
Flash point:	Not applicable
Ignition temperature:	> 350 °C (DIN 51794 method)
Explosion limits:	Dusts with air can create an explosive mixture.
Vapour pressure (20 °C):	Not applicable
Density (20 °C):	Fine polyamide: 1.02 g/cm <sup>3</sup> Aluminium particle: 2.7 g/cm <sup>3</sup>
Solubility in water (20 °C):	Insoluble
pH-value:	Not applicable

### 10 Stability and reactivity

Hazardous decomposition products: No known hazardous decomposition products.

Thermal decomposition: > 300 °C

Hazardous reactions: No hazardous reactions known.

### 11 Toxicological information

Based on previous experiences, no harmful effects have become known.

### 12 Ecological information

The product is water-insoluble. No harmful effects are known. The local wastewater regulations are to be observed. Do not allow to enter bodies of water or sewage system!

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### 13 Disposal considerations

E.g., deliver to a waste incinerator plant under observation of the regulations set by local authorities.

For this product, no waste code-number in accordance with the European waste list can be established, as a classification is not possible due to lack of usage by the consumer up to now.

The waste code-number is to be defined in accordance with the European waste list (EU decision on the waste list 2000/532/EC) in cooperation with the disposer.

### 14 Transport information

Transport / further information: Not hazardous freight in the sense of the transport regulations

### 15 Regulatory information

Designation in accordance with EU directives: Not subject to the requirement to label goods precisely in accordance with the GefStoffV (Regulations on Hazardous Substances) and directive 67/548/EEC

### 16 Other information

Recommended field of use: Laser sintering

This data sheet applies only to the supplied product in accordance with specification by EOS GmbH. If compounds or mixtures with other products are made, ensure that no new hazards arise.

The information contained in this data sheet has been made in good faith and is supported by the latest knowledge concerning this product at the time this data sheet was printed. However, individual statements will be revised. Based on the preceding information, which corresponds to the current state of our knowledge and experiences, it is our intention to describe our product regarding any kind of safety requirements but do not connect this with any warranty or assurance of characteristics.

The consumer's attention is brought to the possible risks during use other than that originally assumed.

This data sheet may only be used and reproduced for purposes of prevention and safety.

The enumeration of the texts regarding legislation, orders and administrative regulations may not be seen as complete.



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The receiver of the product is referred to the entire official texts concerning the use, the storage, and the handling of the product, for which he alone is responsible.

The user of the product is obliged to transfer the necessary information in the form of this safety data sheet to all persons who come into contact with the product (during usage, storage, cleaning of the containers, various employments), who are responsible for the industrial safety, as well as for environmental and health protection.

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