

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 3.3.0, issued: 31.01.2024

Replaced version: 3.2.0, issued: 27.01.2023

Region: GB

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name

Alumide®

Form

This mixture contains nanoforms (according to REACH regulation).

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture

Laser sintering

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

EOS GmbH Electro Optical Systems
Robert-Stirling-Ring 1
82152 Krailling / München
GERMANY

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e-mail info@eos.info

Information provided by / telephone

+49 (0) 89 / 893 36 - 151

Advice on Safety Data Sheet

MSDSInfo@eos.info

1.4 Emergency telephone number

+49 89 893 36 151 (GMT +2)

+65 6430 0463 (GMT +8)

+1 877 388 7916 (GMT -4)

during the usual office hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification information

This product does not meet the classification and labelling criteria given in the Regulation (EC) No 1272/2008 (CLP). According to the provisions of the CLP-Regulation (EC) No. 1272/2008, this product is not subject to mandatory labeling.

2.2 Label elements

Not relevant

Labelling information

The product does not require a hazard warning label in accordance with EC Directives.

2.3 Other hazards

May form explosive gases upon contact with water and/or chemicals. This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

PBT assessment

The product is not considered to be a PBT.

vPvB assessment

The product is not considered to be a vPvB.

SECTION 3: Composition/information on ingredients

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Not applicable. The product is not a substance.

3.2 Mixtures**Chemical characterization**

Mixture based on: Poly (lauryl lactam) (PA12) and aluminium granules

Hazardous ingredients

This product does not contain substances to be mentioned according to EU Regulation No 1907/2006 (REACH), annex II.

3.3 Other information

May form explosive gases upon contact with water and/or chemicals. This mixture contains nanoforms (according to REACH regulation)

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

In case of persisting adverse effects, consult a physician. Change contaminated clothing.

After inhalation

Remove affected person from the immediate area. Ensure supply of fresh air.

After skin contact

When in contact with the skin, clean with soap and water. After contact with molten product, cool quickly with cold water. Do not pull solidified product from skin. Seek medical attention.

After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

After ingestion

Seek medical advice immediately. Rinse the mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Sand; Extinguishing powder

Unsuitable extinguishing media

No data available.

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO); Nitrogen oxides (NO_x); Combustion products of this material have to be classed invariably as respiratory poison.

5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation. Keep away from ignition sources.

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No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Take up mechanically. When collected, handle material as described under the section heading "Disposal considerations".

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

No special measures necessary if stored and handled as prescribed. Avoid the formation and deposition of dust. Provide good ventilation at the work area (local exhaust ventilation, if necessary).

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Provide eye wash fountain in work area. Do not inhale dust. Use barrier skin cream. Areas of the skin soiled with dust are to be cleaned with soap and water without delay, as the powder draws the natural moisture from the skin.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Keep container tightly closed and dry. Protect from atmospheric moisture and water.

Requirements for storage rooms and vessels

Store product in closed containers.

Incompatible products

None known

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
1	aluminium powder (stabilised)	7429-90-5	231-072-3
List of approved workplace exposure limits (WELs) / EH40			
	Aluminium metal		
	total inhalable dust		
	WEL long-term (8-hr TWA reference period)	10	mg/m ³
List of approved workplace exposure limits (WELs) / EH40			
	Aluminium metal		
	respirable dust		
	WEL long-term (8-hr TWA reference period)	4	mg/m ³
2	Dust		
List of approved workplace exposure limits (WELs) / EH40			
	Dust respirable		
	WEL long-term (8-hr TWA reference period)	4	mg/m ³
	Comments	see Definition 44 "Dust"	

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List of approved workplace exposure limits (WELs) / EH40		
Dust inhalable		
WEL long-term (8-hr TWA reference period)	10	mg/m ³
Comments	see Definition 44 "Dust"	

8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event that workplace threshold values are not specified. Respirator with particulate filter (filter cat. P 3)

Eye / face protection

Safety glasses (EN 166)

Hand protection

Unless otherwise indicated in the chemical risk assessment, following recommendations are made: In case of intensive contact, wear protective gloves (EN 374). Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. In case of thermal processing, thermally insulating protective gloves are to be used.

Other

Wear fully closed, flame retardant clothing. Closed ESD safety footwear (ESD according to EN 61340-4-3 or equivalent).

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation	
solid	
Form	
Powder	
Colour	
grey	
Odour	
odourless	
pH value	
Not applicable	
Boiling point / boiling range	
Not applicable	
Melting point/freezing point	
Value	185 °C
Method	EN ISO 11357-1
Source	manufacturer
Decomposition temperature	
Value	> 299 °C
Source	manufacturer
Flash point	

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Not applicable	
Ignition temperature	
Value	450 °C
Method	DIN 51794
Source	manufacturer
Explosive properties	
Product is explosive.	
Flammability	
No data available	
Lower explosion limit	
Value	60 g/m ³
Source	manufacturer
Upper explosion limit	
No data available	
Vapour pressure	
Not applicable	
Relative vapour density	
No data available	
Relative density	
No data available	
Density	
no data available	
Solubility in water	
Source	manufacturer
Comments	insoluble
Solubility	
No data available	
Partition coefficient n-octanol/water (log value)	
No data available	
Kinematic viscosity	
No data available	
Particle characteristics	
Comments	This mixture contains nanoforms (according to REACH regulation). Contains small amounts of components that are nanomaterials as an additive.

9.2 Other information

Other information
Minimum ignition energy with inductivity: 300 - 1000 mJ

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

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None, if handled according to intended use. Protect against humidity.

10.5 Incompatible materials

None, if handled according to order.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute oral toxicity
No data available
Acute dermal toxicity
No data available
Acute inhalational toxicity
No data available
Skin corrosion/irritation
No data available
Serious eye damage/irritation
No data available
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Reproduction toxicity
No data available
Carcinogenicity
No data available
STOT - single exposure
No data available
STOT - repeated exposure
No data available
Aspiration hazard
No data available
Symptoms related to the physical, chemical and toxicological characteristics
Eye contact may cause mechanical irritation through dust particles.
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Inhalation of dusts may irritate the respiratory tract.

11.2 Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish (acute)
No data available

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No data available

Toxicity to Daphnia (acute)

No data available

Toxicity to Daphnia (chronic)

No data available

Toxicity to algae (acute)

No data available

Toxicity to algae (chronic)

No data available

Bacteria toxicity

No data available

12.2 Persistence and degradability**Physico-chemical eliminability****No Product Name**

1 Alumide®

Comments

If used properly, this product does not cause problems, on the strength of previous experience.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment**Results of PBT and vPvB assessment**

PBT assessment

The product is not considered to be a PBT.

vPvB assessment

The product is not considered to be a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information**Other information**

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information**14.1 Transport ADR/RID/ADN**

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

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The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances subject to restriction as listed in Annex XVII of the REACH regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This product is not subject to Part 1 or 2 of Annex I.

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Creation of the safety data sheet

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.



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