

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

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

Telephone no. +49 (0) 89 / 8 93 36 - 0

Fax no. +49 (0) 89 / 8 93 36 - 22 85

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

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. Dust can form an explosive mixture with air.

PBT assessment

According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be PBT.

vPvB assessment

According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be vPvB.

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

SECTION 3: Composition/information on ingredients

3.1 Substances

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

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration
			%
1	copper		
	7440-50-8 231-159-6 - 01-2119480154-42	Aquatic Acute 1; H400 Aquatic Chronic 2; H411	<= 0.10 wt%
2	aluminium powder		
	7429-90-5 231-072-3 - 01-2119529243-45	-	>= 25.00 - < 50.00 wt%
3	Silicon		
	7440-21-3 231-130-8 - 01-2119480401-47	-	>= 5.00 - < 10.00 wt%

Full text of H- and EUH-phrases, if not already mentioned in section 2.2: see section 16.

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
1	-	-	M = 1	-

3.3 Other information

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.

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Sand; Extinguishing powder

Unsuitable extinguishing media

Water

5.2 Special hazards arising from the substance or mixture

Contact with water releases flammable gases. 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.

For emergency responders

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

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. The product must be collected using suitable means such as brooms, vacuum cleaners or collection systems, preventing it from entering the environment.

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). Contact with water releases flammable gases.

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. Open storage or transport in unsecured containers should be avoided.

Requirements for storage rooms and vessels

Store product in closed containers.

Incompatible products

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

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	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	Silicon	7440-21-3	231-130-8
List of approved workplace exposure limits (WELs) / EH40			
Silicon			
total inhalable dust			
	WEL long-term (8-hr TWA reference period)	10	mg/m ³
List of approved workplace exposure limits (WELs) / EH40			
Silicon			
respirable dust			
	WEL long-term (8-hr TWA reference period)	4	mg/m ³
3	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"	
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"	
4	copper	7440-50-8	231-159-6
List of approved workplace exposure limits (WELs) / EH40			
Copper			
fume			
	WEL long-term (8-hr TWA reference period)	0.2	mg/m ³
List of approved workplace exposure limits (WELs) / EH40			
Copper			
dusts and mists			
Cu			
	WEL short-term (15 min reference period)	2	mg/m ³
	WEL long-term (8-hr TWA reference period)	1	mg/m ³

DNEL, DMEL and PNEC values**DNEL values (worker)**

No	Substance name	CAS / EC no	
	Route of exposure	Exposure time	Effect
			Value
1	copper		7440-50-8 231-159-6
	dermal	Short term (acut)	systemic 273 mg/kg/day
	dermal	Long term (chronic)	systemic 137 mg/kg/day

Trade name: Alumide®**Product no.:** 9012-0029 / 200000331**Current version :** 4.0.0, Revision:: 17.10.2025**Replaced version:** 3.6.0, Revision:: 09.07.2025**Region:** GB

	inhalative	Long term (chronic)	local	1	mg/m ³
	inhalative	Short term (acute)	local	1	mg/m ³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	copper			7440-50-8 231-159-6	
	oral	Long term (chronic)	systemic	0.041	mg/kg/day
	dermal	Short term (acute)	systemic	273	mg/kg/day
	dermal	Long term (chronic)	systemic	137	mg/kg/day
	inhalative	Short term (acute)	local	1	mg/m ³
	inhalative	Long term (chronic)	local	1	mg/m ³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	copper		7440-50-8 231-159-6	
	water	fresh water	6.3	µg/L
	water	marine water	5.2	µg/L
	water	fresh water sediment	87	mg/kg
	water	marine water sediment	676	mg/kg
	soil	-	65	mg/kg
	sewage treatment plant	-	230	µg/L

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

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

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	
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	

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

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

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	Substance name	CAS no.	EC no.
1	copper	7440-50-8	231-159-6
LC50	>	5.11	mg/l
Duration of exposure		4	h
State of aggregation	Dust/mist		
Species	rat		
Method	OECD 436		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Skin corrosion/irritation
No data available

Serious eye damage/irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
1	copper	7440-50-8	231-159-6
Type of examination	in vitro gene mutation study in bacteria		
Species	Salmonella typhimurium TA98, TA100, TA102, TA1535, TA1537		
Method	OECD 471		

Trade name: Alumide®**Product no.:** 9012-0029 / 200000331**Current version :** 4.0.0, Revision:: 17.10.2025**Replaced version:** 3.6.0, Revision:: 09.07.2025**Region:** GB

Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Route of exposure	oral
Type of examination	In vivo mammalian somatic cell study: cytogenicity / erythrocyte micronucleus
Species	mouse
Method	EU Method B.12
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.

Reproduction toxicity			
No	Substance name	CAS no.	EC no.
1	copper	7440-50-8	231-159-6
Route of exposure		oral	
Type of examination		Two-Generation Reproduction Toxicity Study	
Species		rat	
Method		OECD 416	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Carcinogenicity	
No data available	

STOT - single exposure	
No data available	

STOT - repeated exposure	
No data available	

Aspiration hazard	
No data available	

Endocrine disrupting properties	
Product Name	
Alumide®	
Pursuant to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, the product does not contain any endocrine disruptors in a concentration of 0.1% weight by weight and above.	

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

Other information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	copper	7440-50-8	231-159-6
LC50		0.035	mg/l
Duration of exposure		96	h
Species		Danio rerio	
Method		ISO TC 147/SC 5/WG3 (secretariat 6)	
Source		ECHA / Read across	

Toxicity to fish (chronic)			
No	Substance name	CAS no.	EC no.

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

1	copper	7440-50-8	231-159-6
NOEC		0.023	mg/l
Duration of exposure		7	day(s)
Species	Pimephales promelas		
Method	OECD 204		
Source	ECHA		

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	copper	7440-50-8	231-159-6
EC50		0.034	- 0.792
Duration of exposure			48
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		

Toxicity to Daphnia (chronic)			
No	Substance name	CAS no.	EC no.
1	copper	7440-50-8	231-159-6
NOEC		0.032	mg/l
Duration of exposure		7	day(s)
Species	Daphnia magna		
Method	OECD 211		

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	
Product Name	
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	
Product Name	
Alumide®	
PBT assessment	According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be PBT.
vPvB assessment	According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be vPvB.

12.6 Endocrine disrupting properties

Endocrine disrupting properties	
Product Name	
Alumide®	
Pursuant to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, the product does not contain any endocrine disruptors in a concentration of 0.1% weight by weight and above.	

Trade name: Alumide®

Product no.: 9012-0029 / 200000331

Current version : 4.0.0, Revision:: 17.10.2025

Replaced version: 3.6.0, Revision:: 09.07.2025

Region: GB

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.

Products that are no longer usable must be collected in suitable containers and disposed of appropriately.

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 UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

14.2 UN proper shipping name

Not classified as dangerous in the meaning of transport regulations.

14.3 Transport hazard class(es)

Not classified as dangerous in the meaning of transport regulations.

14.4 Packing group

Not classified as dangerous in the meaning of transport regulations.

14.5 Environmental hazards

Not classified as dangerous in the meaning of transport regulations.

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

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII. No 75, 78

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

Trade name: Alumide®**Product no.:** 9012-0029 / 200000331**Current version :** 4.0.0, Revision:: 17.10.2025**Replaced version:** 3.6.0, Revision:: 09.07.2025**Region:** GB

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

National regulations**Other regulations**

The product contains: Reportable explosives precursors. Making available, transfer, possession and use in accordance with Regulation (EU) 2019/1148 Article 9 (Aluminium, CAS 7429-90-5, Annex II); Microplastic content: 45–55% polyamide

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.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H400

Very toxic to aquatic life.

H411

Toxic to aquatic life with long lasting effects.

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.

Creation of the safety data sheet

UMCO GmbH

Georg-Wilhelm-Str. 187, D-21107 Hamburg

Tel.: +49 40 / 555 546 300 Fax: +49 40 / 555 546 357 e-mail: umco@umco.de

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.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO GmbH.

Prod-ID 611156