

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



Al AM205 powder 20-63 µm

Version	Revision Date:	SDS Number:	Print Date: 15.04.2024
2.1	02.04.2024	102000036882	Date of first issue: 25.10.2023

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

1.1 Product identifier

Trade name : Al AM205 powder 20-63 µm

Product code : 031419V30

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

This information is not available.

1.3 Details of the supplier of the safety data sheet

Company : ECKART TLS GmbH
PC-Straße 5
06749 Bitterfeld-Wolfen
Germany

Telephone : +493493929590

Telefax : +4934939295999

E-mail address of person responsible for the SDS : info.eckart.tls@altana.com

1.4 Emergency telephone number

NCEC: +44 1235 239670 (Europe)
Call and response in your language is possible.
Contract no.: ECKART29003-NCEC.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



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Hazard statements	:	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements	:	Prevention: P273 Response: P391 Disposal: P501	Avoid release to the environment. Collect spillage. Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

Combustible Solids

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	ClassificationREGUL ATION (EC) No 1272/2008	Concentration (% w/w)
copper	7440-50-8 231-159-6 01-2119480154-42	Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1	>= 2.5 - < 10
titanium	7440-32-6 231-142-3	Flam. Sol. 1; H228	>= 1 - < 10
silver	7440-22-4 231-131-3	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 0.25 - < 1

For explanation of abbreviations see section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move the victim to fresh air.
- Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with soap and plenty of water.
- In case of eye contact : Remove contact lenses.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Dry sand
Special powder against metal fire
- Unsuitable extinguishing media : ABC powder
Carbon dioxide (CO₂)
Foam
Water

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Contact with water liberates extremely flammable gas (hydrogen).
- Do not allow run-off from fire fighting to enter drains or water courses.

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5.3 Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment.
Evacuate personnel to safe areas.
Avoid dust formation.

6.2 Environmental precautions

- General advice : The product should not be allowed to enter drains, water courses or the soil.
Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Use mechanical handling equipment.
Do not use a vacuum cleaner.
- Pick up and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Avoid creating dust.
Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
Store away from heat.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
- Advice on protection against : Use explosion-proof equipment. During processing, dust may
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fire and explosion form explosive mixture in air. Take measures to prevent the build up of electrostatic charge. When transferring from one container to another apply earthing measures and use conductive hose material.

Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen) Use explosion-proof equipment. Store in original container. Keep away from sources of ignition - No smoking. Keep container closed when not in use.

Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Protect from humidity and water.

Advice on common storage : Do not store together with oxidizing and self-igniting products. Never allow product to get in contact with water during storage. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

No materials to be especially mentioned.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
aluminium	7429-90-5	TWA (inhalable dust)	10 mg/m ³	GB EH40
		TWA (Respirable dust)	4 mg/m ³	GB EH40
copper	7440-50-8	TWA (Fumes)	0.2 mg/m ³ (Copper)	GB EH40

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		TWA (Dusts and mists)	1 mg/m3 (Copper)	GB EH40
		STEL (Dusts and mists)	2 mg/m3 (Copper)	GB EH40
titanium	7440-32-6	TWA (Inhalable)	10 mg/m3	GB EH40
		TWA (Respirable fraction)	4 mg/m3	GB EH40
silver	7440-22-4	TWA	0.1 mg/m3	2000/39/EC
Further information: Indicative				
		TWA	0.1 mg/m3	GB EH40
Further information: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.				
		TWA	0.01 mg/m3 (Silver)	2006/15/EC
Further information: Indicative				

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
aluminium	Workers	Inhalation	Long-term local effects	3.72 mg/m3
	Consumers	Oral	Long-term systemic effects	3.95 mg/kg
	Workers	Inhalation	Long-term systemic effects	3.72 mg/m3
copper	Workers	Dermal	Long-term systemic effects	137 mg/kg
	Workers	Dermal	Acute systemic effects	273 mg/kg
	Consumers	Inhalation	Long-term local effects	1 mg/m3
	Consumers	Inhalation	Acute local effects	1 mg/m3
	Consumers	Dermal	Long-term systemic effects	137 mg/kg
	Consumers	Dermal	Acute systemic effects	273 mg/kg
	Consumers	Oral	Long-term systemic effects	0.041 mg/kg
silver	Workers	Inhalation	Long-term systemic effects	0.1 mg/m3
	Consumers	Inhalation	Long-term systemic effects	0.04 mg/m3
	Consumers	Oral	Long-term systemic effects	1.2 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
aluminium	clarification plant	20 mg/l
copper	Fresh water	0.0078 mg/l
	Marine water	0.0052 mg/l
	STP	0.230 mg/l

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	Fresh water sediment	87 mg/kg
	Marine sediment	676 mg/kg
	Soil	65 mg/kg
silver	Fresh water	0.0004 mg/l
	STP	0.025 mg/l
	Marine water	0.0086 mg/l
	Fresh water sediment	438.13 mg/kg
	Marine sediment	438.13 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Face-shield
Safety glasses

Hand protection
Material : Leather
Glove length : Long sleeve gloves

Remarks : Leather gloves The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Skin and body protection : Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1. Anti-static safety shoes.
Protective suit

Respiratory protection : Use suitable breathing protection if workplace concentration requires.
Breathing apparatus with filter.
P1 filter

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form : granular

Colour : No data available

Odour : characteristic

Odour Threshold : No data available

Freezing point : No data available

Boiling point/boiling range : No data available

Flammability : Combustible Solids

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

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Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	substance/mixture is non-soluble (in water)
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Density	:	No data available
Relative vapour density	:	No data available
Particle characteristics		
Particle Size Distribution	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Contact with acids and alkalis may release hydrogen.

Stable under recommended storage conditions.

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : No data available

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10.5 Incompatible materials

Materials to avoid : Acids
Bases
Oxidizing agents
Water

10.6 Hazardous decomposition products

This information is not available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Further information

Product:

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Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

copper:

M-Factor (Short-term (acute) : 1
aquatic hazard)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

silver:

M-Factor (Short-term (acute) : 10
aquatic hazard)

M-Factor (Long-term : 10
(chronic) aquatic hazard)

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

No data available

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12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

European Waste Catalogue : 10 03 21 - other particulates and dust (including ball-mill dust) containing hazardous substances

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.

SECTION 14: Transport information

14.1 UN number or ID number

ADR	: UN 3077
IMDG	: UN 3077
IATA	: UN 3077

14.2 UN proper shipping name

ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper metal powder)
IATA	: Environmentally hazardous substance, solid, n.o.s. (Copper metal powder)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 9	
IMDG	: 9	
IATA	: 9	

14.4 Packing group

ADR
Packing group : III

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Classification Code : M7
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F
Remarks : IMDG Code segregation group 7 - Heavy metals and their salts

IATA (Cargo)

Packing instruction (cargo aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : 9

IATA (Passenger)

Packing instruction (passenger aircraft) : 956
Packing instruction (LQ) : Y956
Packing group : III
Labels : 9

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

Remarks : For single packagings ≤ 5L / 5 kg, or combination packagings containing inner packagings ≤ 5L / 5 kg net per inner packaging, SV375 ADR, 2.10.2.7 IMDG-Code, A197 IATA-DGR may be applied.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: titanium (Number on list 40) magnesium, powder or turnings (Number on list 40)
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	aluminium magnesium, powder or turnings
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	
This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.	:	aluminium (ANNEX II) magnesium, powder or turnings (ANNEX II)

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H228	:	Flammable solid.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Flam. Sol.	:	Flammable solids

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2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2006/15/EC	:	Europe. Indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2000/39/EC / TWA	:	Limit Value - eight hours
2006/15/EC / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Aquatic Chronic 2 H411

Classification procedure:

Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the

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specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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