Trade name: EOS Aluminium AlSi10Mg
Product no.: 9011-0024
Current version : 7.0.0, issued: 12.12.2023 **Replaced version:** 6.0.0, issued: 27.7.2021 **Region:** GB

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

1.1 Product identifier

Trade name

EOS Aluminium AlSi10Mg

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

Relevant identified uses of the substance or mixture
Industrial use
Aluminium alloy for DMLS processes in EOS M systems

Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet

Address
Electro Optical Systems Finland Oy
Lemminkäisenkatu 36
20520 Turku
FINLAND

Telephone no. +358 (0) 20 765 9144 / 9147

Information provided by / telephone
+49 (0) 89 / 893 36 – 0 or +358 (0) 20 765 9144 / 9140

Advice on Safety Data Sheet
MSDSInfo@eos.info

1.4 Emergency telephone number

EU:
+49 (0) 89 / 893 36 - 0 (8 am - 5 pm)
+49 (0) 89 / 893 36 - 151 (Mo - Thu: 9 am - 12 pm & 1 - 6 pm; Fr: 1 - 4 pm) (CET)
USA:
+1 877 388 7916 (GMT -4)
Asia:
+65 6430 0463 (GMT +8)

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).

2.2 Label elements

Not relevant

2.3 Other hazards

Dust can form an explosive mixture with air. 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 study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

vPvB assessment
The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Chemical characterization
Alloy

Hazardous ingredients

No	Substance name		Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	**aluminium powder (stabilised)**			
	7429-90-5 231-072-3 013-002-00-1 01-2119529243-45	Flam. Sol. 1; H228 Water-react. 2; H261	>= 70.00 - < 90.00	wt%
2	**Silicon**			
	7440-21-3 231-130-8 - 01-2119535442-45	-	9.00 - 11.00	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

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

Full text for the notes: pls. see section 16 “Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)”.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated clothing and shoes and launder thoroughly before reusing. In case of persisting adverse effects, consult a physician.

After inhalation
Ensure supply of fresh air.

After skin contact
When in contact with the skin, clean with soap and water.

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
Rinse the mouth thoroughly with water. Do not induce vomiting. 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
Dry chemical extinguisher; Sand

Unsuitable extinguishing media
Water; Foam; Carbon dioxide

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); Aluminium oxide

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.

For emergency responders
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

Collect mechanically. Avoid raising dust. When collected, handle material as described under the section heading "Disposal considerations".

6.4 Reference to other sections

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Avoid the formation and deposition of dust.

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. Do not inhale dust.

Advice on protection against fire and explosion
Dust can form an explosive mixture with air. Keep away from sources of ignition and flames.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep container tightly closed and dry in a cool, well-ventilated place. Protect from atmospheric moisture and water.

Requirements for storage rooms and vessels
Containers which are opened must be carefully resealed and kept upright to prevent leakage. Always keep in containers of same material as the original. Protect from heat and direct sunlight.

Incompatible products
Substances to be avoided, see section 10.

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/m³
	List of approved workplace exposure limits (WELs) / EH40		
	Aluminium metal		
	respirable dust		
	WEL long-term (8-hr TWA reference period)	4	mg/m³

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/m³	
	List of approved workplace exposure limits (WELs) / EH40			
	Silicon			
	respirable dust			
	WEL long-term (8-hr TWA reference period)	4	mg/m³	

DNEL, DMEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	**Exposure time**	**Effect**	**Value**	
1	**aluminium powder (stabilised)**			**7429-90-5 231-072-3**	
	inhalative	Long term (chronic)	systemic	3.72	mg/m³
	inhalative	Long term (chronic)	local	3.72	mg/m³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	**Exposure time**	**Effect**	**Value**	
1	**aluminium powder (stabilised)**			**7429-90-5 231-072-3**	
	oral	Long term (chronic)	systemic	7.9	mg/kg/day

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	**Type**	**Value**	
1	**aluminium powder (stabilised)**		**7429-90-5 231-072-3**	
	water	fresh water	74.9	µg/L
	sewage treatment plant	-	20	mg/L

8.2 Exposure controls

Appropriate engineering controls
Ensure adequate ventilation, local exhaust at the work station if necessary.

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
Respirator P3

Eye / face protection
Safety glasses (EN 166)

Hand protection
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.
Appropriate Material Nitrile rubber, butyl rubber

Other
Chemical-resistant work clothes.

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
No data available

Melting point/freezing point
No data available

Decomposition temperature
No data available

Flash point	
Comments	non-flammable

Ignition temperature
No data available

Flammability
No data available

Lower explosion limit
No data available

Upper explosion limit
No data available

Vapour pressure
No data available

Relative vapour density
No data available

Relative density
No data available

Density				
Value	1200	-	1750	kg/m³
Reference temperature			20	°C

Solubility in water	
Comments	insoluble in water

Solubility
No data available

Partition coefficient n-octanol/water (log value)
No data available

Kinematic viscosity
No data available

Particle characteristics

Comments	Particle size distribution: 20-80 µm Particle shape: spherical

9.2 Other information

Other information
Class number: (20°C/100°C; natural gas flame): BZ 2 Maximum explosion overpressure (Pmax): 7,7 bar*m/s Kst value: 57 bar*m/s Dust explosion class: St 1 Smouldering temperature: > 400 °C Minimum ignition energy (MIE): With inductivity: 300 mJ < MIE <1000 mJ Without inductivity: MIE > 1000 mJ Relative evaporation rate (butyl acetate=1): Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions
Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid
Protect from sun. Extremes of temperatures. Protect against humidity.

10.5 Incompatible materials
strong acids; strong bases

10.6 Hazardous decomposition products
None if stored, handled and transported properly. In case of fire: see section 5.

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	**aluminium powder (stabilised)**	**7429-90-5**		**231-072-3**
LC50	>	0.88		mg/l
Duration of exposure		4		h
State of aggregation	Dust/mist			
Species	rat			
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 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

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

Toxicity to fish (chronic)
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
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

Results of PBT and vPvB assessment	
PBT assessment	The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).
vPvB assessment	The study does not need to be conducted according to Annex XIII of Regulation (EC) 1907/2006 (REACH).

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
Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.
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
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

The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No	Substance name	CAS no.	EC no.	No
1	aluminium powder (stabilised)	7429-90-5	231-072-3	75

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.

Other regulations
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment

A chemical safety assessment has been carried out for the following substance/s in this mixture:

CAS no. 7429-90-5
EC no. 231-072-3

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)

H228 Flammable solid.
H261 In contact with water releases flammable gases.

Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No 1272/2008, Annex VI)

T This substance may be marketed in a form which does not have the physical hazards as indicated by the classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed does not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method(s) shall be included in the safety data sheet.