



EOS Aluminium AlSi10Mg

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 8/2/2017 Revision date: 7/27/2021 Version: 6.0

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

1.1. Product identifier

Product form : Mixture
Name : EOS Aluminium AlSi10Mg
Product code : 9011-0024
Type of product : Alloy, Powder

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
Use of the substance/mixture : Aluminium alloy for DMLS processes in EOS M systems

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Electro Optical Systems Finland Oy
Lemminkäisenkatu 36
20520 Turku
FINLAND
T +358 (0) 20 765 9144/9147 - F +358 (0) 20 765 9141
MSDSInfo@eos.info - <https://www.eos.info/>

1.4. Emergency telephone number

Emergency number : +49 (0) 89 / 893 36 - 0 (8 am - 5 pm);
+49 (0) 89 / 893 36 - 151 (Mon-Thurs 9 am - 12 pm & 1 pm - 6 pm; Fri 1 pm - 4 pm (CET))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

EOS Aluminium AlSi10Mg

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aluminum powder	CAS-No.: 7429-90-5 EC-No.: 231-072-3 EC Index-No.: 013-001-00-6 REACH-no: 01-2119529243-45	87,1 - 89	Flam. Sol. 1, H228 Water-react. 2, H261
Silicon	CAS-No.: 7440-21-3 EC-No.: 231-130-8;240-968-3 REACH-no: 01-2119535442-45	9 - 11	Not classified

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry powder. Sand.
Unsuitable extinguishing media	: Water. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Minimal fire hazard.
Explosion hazard	: Dust may form explosive mixture in air.
Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide. Aluminium oxide.

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Avoid creating or spreading dust. Prevent runoff from entering drains, sewers or waterways.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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EOS Aluminium AlSi10Mg

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.
For disposal of residues refer to section 13 : Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Take precautionary measures against static discharge. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures : Wash hands thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Keep away from : Water, humidity.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Aluminum (7429-90-5)		
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (inhalable dust) 4 mg/m ³ (respirable dust)
United Kingdom	WEL STEL (mg/m ³)	12 mg/m ³ (calculated value)

Silicon (7440-21-3)		
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (inhalable dust) 4 mg/m ³ (respirable dust)
United Kingdom	WEL STEL (mg/m ³)	12 mg/m ³ (calculated-respirable dust)
United Kingdom	WEL STEL (ppm)	30 ppm (calculated-inhalable dust)

8.1.2. Recommended monitoring procedures

Monitoring methods

Biological monitoring methods : Analysis of urine samples

8.1.3. Air contaminants formed

No additional information available

EOS Aluminium AlSi10Mg

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide adequate ventilation.

See Heading 7. Handling and Storage.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Hand protection:

In case of repeated or prolonged contact (industrial environment), wear gloves; Chemical resistant gloves (according to European standard EN 374 or equivalent). Appropriate material: butyl rubber; nitrile rubber.

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable particle mask (P3).

8.2.2.4. Thermal hazards

Thermal hazard protection:

Wear personal protective equipment.

8.2.3. Environmental exposure controls

See Heading 6: Accidental release measures

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Grey
Appearance	: Powder
Odour	: None
Odour threshold	: Not applicable
Melting point	: Not determined
Freezing point	: Not determined
Boiling point	: Not determined
Flammability	: Non flammable

EOS Aluminium AlSi10Mg

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Explosive limits	: Max. explosion overpressure (pmax): 7.7 bar. KSt value/dust explosion class (St): 57 bar*m/s
Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: Not determined
Auto-ignition temperature	: Not determined
Decomposition temperature	: Not determined
pH	: Not applicable
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Solubility	: Insoluble in water
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: Not determined
Vapour pressure	: Not determined
Vapour pressure at 50 °C	: Not available
Density	: 1200 – 1750 kg/m ³
Relative density	: Not determined
Relative vapour density at 20 °C	: Not determined
Particle size	: Not available
Particle size distribution	: 20-80 µm
Particle shape	: Spherical
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Minimum ignition energy	: With inductivity: 300 mJ < MIE < 1000 mJ Without inductivity: MIE >1000 mJ
Relative evaporation rate (butylacetate=1)	: Not determined
Other properties	: Smouldering temperature: > 400 °C Class number (20 °C and 100 °C); natural gas flame): BZ 2

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Protect from humidity.

10.5. Incompatible materials

Strong acids. Strong bases. Humidity.

10.6. Hazardous decomposition products

Aluminium oxides. Fume.

EOS Aluminium AISi10Mg

Safety Data Sheet

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SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Aluminum (7429-90-5)

LC50 Inhalation - Rat	> 0.888 mg/l/4h
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Silicon (7440-21-3)

LD50 oral rat	3160 mg/kg
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Skin corrosion/irritation : Not classified
pH: Not applicable
Additional information : Based on available data, the classification criteria are not met
Serious eye damage/irritation : Not classified
pH: Not applicable
Additional information : Based on available data, the classification criteria are not met
Respiratory or skin sensitisation : Not classified
Additional information : Based on available data, the classification criteria are not met
Germ cell mutagenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-single exposure : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met
Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

EOS Aluminium AISi10Mg

Viscosity, kinematic	Not applicable
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not harmful to aquatic organisms
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

EOS Aluminium AISi10Mg

Persistence and degradability	Not established
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EOS Aluminium AlSi10Mg

Safety Data Sheet

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12.3. Bioaccumulative potential

EOS Aluminium AlSi10Mg	
Partition coefficient n-octanol/water (Log Pow)	Not determined
Bioaccumulative potential	Not established

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

EOS Aluminium AlSi10Mg	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Not applicable

EOS Aluminium AlSi10Mg

Safety Data Sheet

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14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out: Aluminium.

SECTION 16: Other information

Indication of changes:

According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II).

Sources of Key data

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: None.

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Flam. Sol. 1	Flammable solids, Category 1
H228	Flammable solid
H251	Self-heating: may catch fire
H261	In contact with water releases flammable gases
H301	Toxic if swallowed
Self-heat. 1	Self-Heating Substances and Mixtures, Category 1
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.