

SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)



ATOMIZEDALUMINUM/ALUMINUM AS81/ALUMINUM AS91

Version: 4
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING.

1.1 Product identifier.

Product Name: ATOMIZEDALUMINUM/ALUMINUM AS81/ALUMINUM AS91
Chemical Name: ALUMINUM
Index No: 013-002-00-1
CAS No: 7429-90-5
EC No: 231-072-3
Registration No: 01-2119529243-45-XXXX

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

Pyrotechnical compositions

Uses advised against:

Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Company: **ALDEBARÁN SISTEMAS SL**
Address: C/Jerónimo Zurita, 10, entlo izda, 50001
City: Zaragoza
Province: Zaragoza
Telephone: 0034976796134
E-mail: aldebaran@aldebaransistemas.com

1.4 Emergency telephone number: 0034915620420 (Available 24 hours)

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the substance.

Classification according to Regulation (EC) No 1272/2008

The product is not classified, according to the Globally Harmonised System (GHS).
The product is not classified to the CLP regulation.

Additional information:

This product is not classified as flammable, differing from the entry in Annex VI of the Regulation (EC) No. 1272/2008 (GHS regulation) due to results of testing according test method N.1 in Part III, sub-section 33.2.1 (flammable solids) and test method N.5 in Part III, sub-section 33.4.1.4 (Substances and mixtures which in contact with water emit flammable gases) of the UN Recommendations on the Transport of dangerous Goods, Manual of Tests and Criteria.

2.2 Label elements.

Labelling according to Regulation (EC) No 1272/2008:	Void	
Hazard pictograms:		Void
Signal words:	Void	
Hazard statements:		Void

2.3 Other hazards.

Dust can combine with air to form an explosive mixture.

Results of PBT and vPvB assessment

PBT: Not applicable
vPvB: Not applicable

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.2 Mixtures.

Description: Alloy of substances listed below.

Dangerous components:		
CAS: 7429-90-5 EINECS: 231-072-3 Reg.nr: 01-2119529243-45	Aluminium	>80%
CAS: 7440-21-3 EINECS: 231-130-8 Reg.nr: 01-2119480401-47	Silicon	0 - 14%
	Flam. Sol. 2, H228	
CAS: 7439-95-4 EINECS: 231-104-6 Reg.nr: 01-2119537203-49	Magnesium	0 - 6%
CAS: 7440-32-6 EINECS: 231-142-3 Reg.nr: 01-2119484878-14	Titanium	0 - 0,4%
CAS: 7440-50-8 EINECS: 231-159-6 Reg.nr: 01-2119480154-42	Copper	
	Aquatic Acute 1, H400 (M=1); Aquatic chronic 3, H412	

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.

Due to the composition and type of the substances present in the product, no particular warnings are necessary.

Inhalation.

Supply fresh air; consult doctor in case of complaints.

Eye contact.

Rinse opened eye for several minutes under running water.
If symptoms persist consult doctor.

Skin contact.

Generally the product does not irritate the skin.

Ingestion.

If symptoms persists consult doctor.

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

No known acute or delayed effects from exposure to the product.

4.3 Indication of any immediate medical attention and special treatment needed.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

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SECTION 5: FIREFIGHTING MEASURES.

5.1 Extinguishing media.

Recommended extinguishing methods.

Special powder for metal fire. Do not use water.

Dry sand

Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons insuitable extinguishing agents:

Water

Foam

ABC powder

Carbon dioxide

5.2 Special hazards arising from the substance.

Dust can combine with air to form an explosive mixture.

Contacta with water releases flammable gases.

Hydrogen

5.3 Advice for firefighters.

No special measures required.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.

Avoid formation of dust

Keep away from ignition sources.

6.2 Environmental precautions.

Do not allow to enter sewers / surface or ground water.

6.3 Methods and material for containment and cleaning up.

Do not flush with water or aqueous cleansing agents.

Pick up mechanically.

Do not use vacuum cleaner.

6.4 Reference to other sections.

See section 7 for information on safe handling

SECTION 7: HANDLING AND STORAGE.

7.1 Precautions for safe handling.

Avoid the formation of dust.

Remove the dust that is inevitably formed regularly.

Keep fire sources away. No Smoking.

Protect against electrostatic charges.

Dust can combine with air to form an explosive mixture.

Use explosion-proof apparatus / fittings and spark-proof tools.

Use equipment and accessories protected against explosions and tools that do not produce sparks.

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7.2 Conditions for safe storage, including any incompatibilities.

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions: store in dry conditions

7.3 Specific end use(s).

No further relevant information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

Ingredients with limit values that require monitoring at the workplace	
7429-90-5 Aluminium	
WEL	Long term value: 10* 4** mg/m ³ *Inhalable dust **Respirable dust
7440-21-3 Silicon	
WEL	Long term value: 10* 4** mg/m ³ *Inhalable dust **Respirable dust

The list valid during the making were used as basis.

8.2 Exposure controls.

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

Filter P1

Filter P2

Filter P3

Use suitable respiratory protective device when high concentrations are present.

Protection of hands: Preventive skin protection by use of skin-protecting agents is recommended.
Protective gloves

Eye protection: Goggles recommended during refilling

Body protection: Protective work clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

Appearance: Powder

Colour: Silver grey

Odour: Odourless

Odour threshold: N.A./N.A.

pH: N.A./N.A.

Melting point: 660 °C

Boiling Point: 2467 °C

Flash point: 12 °C

Evaporation rate: N.A./N.A.

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Inflammability (solid, gas): N.A./N.A.
Lower Explosive Limit: 40 gm/m³
Upper Explosive Limit: N.A./N.A.
Vapour pressure: N.A./N.A.
Vapour density: N.A./N.A.
Relative density: 2,7 g/cm³
Solubility: Insoluble in water and organic solvents
Liposolubility: N.A./N.A.
Hydrosolubility: N.A./N.A.
Partition coefficient (n-octanol/water): N.A./N.A.
Auto-ignition temperature: Product is not selfigniting
Decomposition temperature: N.A./N.A.
Viscosity: N.A./N.A.
Explosive properties: Product does not present an explosion hazard. Dust can combine with air to form an explosive mixture.
Oxidizing properties: N.A./N.A.
N.A./N.A.= Not Available/Not Applicable due to the nature of the product

9.2 Other information.

Pour point: N.A./N.A.
Blink: N.A./N.A.
Kinematic viscosity: N.A./N.A.
N.A./N.A.= Not Available/Not Applicable due to the nature of the product

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.

No more relevant information available.

10.2 Chemical stability.

No decomposition if used and store according to specifications.

10.3 Possibility of hazardous reactions.

Contact with water releases flammable gases.
Risk of dust explosion
Reacts with acids, alkalis and oxidising agents.

10.4 Conditions to avoid.

No further relevant information available

10.5 Incompatible materials.

No further relevant information available

10.6 Hazardous decomposition products.

No further relevant information available

SECTION 11: TOXICOLOGICAL INFORMATION.

11.1 Information on toxicological effects.

There are no tested data available on the product.
Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.
Splatters in the eyes can cause irritation and reversible damage.

a) acute toxicity;

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Not conclusive data for classification.

b) skin corrosion/irritation;
Not conclusive data for classification.

c) serious eye damage/irritation;
Not conclusive data for classification.

d) respiratory or skin sensitisation;
Not conclusive data for classification.

e) germ cell mutagenicity;
Not conclusive data for classification.

f) carcinogenicity;
Not conclusive data for classification.

g) reproductive toxicity;
Not conclusive data for classification.

h) STOT-single exposure;
Not conclusive data for classification.

i) STOT-repeated exposure;
Not conclusive data for classification.

j) aspiration hazard;
Not conclusive data for classification.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

No information is available regarding the ecotoxicity.

12.2 Persistence and degradability.

No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potencial.

No information is available regarding the bioaccumulation.

12.4 Mobility in soil.

No information is available about the mobility in soil.
The product must not be allowed to go into sewers or waterways.
Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

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SECTION 13 DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.

Recommendation:

Contact manufacturer for recycling information.

Must not be disposed together with household garbages. Do not allow product to reach sewage system.

European waste catalogue

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste Codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 03 00	Off-specification batches and unused products
16 03 04	Inorganic wastes other than those mentioned in 16 03 03

SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

14.1 UN number.

Void

14.2 UN proper shipping name.

Description:

ADR: Void

IMDG: Void

ICAO: Void

14.3 Transport hazard class(es).

Void

14.4 Packing group.

Void

14.5 Environmental hazards.

No

14.6 Special precautions for user.

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.

Not applicable

SECTION 15: REGULATORY INFORMATION.

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

National Regulation

Waterhazard class: Generally not hazardous for water.

15.2 Chemical safety assessment.

A chemical Safety Assessment has not been carried out.

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SECTION 16: OTHER INFORMATION.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H228 Flammable solid

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects

Abbreviations and acronyms used:

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

PPE: Personal protection equipment.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.