SAFETY DATA SHEET

Aluminum alloys for foundry and desox application

SECTION 1. Identification of the substance/mixture and of the company

1.1 Product identifier: Aluminum alloys for foundry and desox application

1.2 Relevant identified uses of the product and uses advised against

Intended use: Only for industrial use.

1.3 Details of the supplier of the safety data sheet

Manufacturer:	Stena Aluminium AB,
Address:	Box 44 SE 343 21 Älmhult
Country:	Sweden
Tel.	+46010 445 9500
Contact person:	Environmental Manager
Email:	info@stenaaluminium.com
Web:	www.stenaaluminium.com

1.4 Telephone emergency number:

In case of emergency, contact toxicological information, emergency tel 112.
For non-emergency poison information, see:
http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 (CLP)

The product is not classified.

2.2 Label elements

Classification according to regulation (EC) No 1272/2008 (CLP)

Pictogram(s): Not required.

Signal word: Not required.

Hazard statements: Not required.

Precautionary statements: Not required.

Additional information

EUH208 Contains Nickel. May produce an allergic reaction.

2.3 Other hazards

The substance does not meet the PBT or vPvB criterion according to Regulation (EU) 1907/2006, Annex XIII. In case of unsuitable storage, the moisture content of the air can form condensation on the surface of the metal. If moist ingots are added to liquid metal, explosion may occur, which may cause liquid metal to be thrown out of the oven.

Dust and smoke can be formed during processes such as welding, grinding and sawing. The composition of these will be the same as for the product, except for welding, where the composition also depends on the welding method and "filler material".

SECTION 3. Composition/information on ingredients

3.2 Mixtures

Declaration of ingredients according to CLP (EG) No 1272/2008:

Substance	CAS-no EG-no	REACH-regno Indexno	Weight %	Classification
Aluminium (Al)	7429-90-5 231-072-3	01-2119529243-45	> 62	Not classified
Silicon (Si)	7440-21-3 231-130-8	01-2119480401-47	< 15	Not classified
Iron (Fe)	7439-89-6 231-096-4	01-2119462838-24	< 2	Not classified
Magnesium (Mg)	7439-95-4 231-104-6	01-2119537203-49	< 6	Not classified
Copper (Cu)	7440-50-8 231-159-6	01-2119480154-42	< 4	Not classified*
Manganese (Mn)	7439-96-5 231-105-1	01-2119449803-34	< 0,6	Not classified
Titanium (Ti)	7440-32-6 231-142-3	01-2119484878-14	< 0,2	Not classified
Zinc (Zn)	7440-66-6 231-175-3	01-2119467174-37	< 10	Not classified**
Lead (Pb)	7439-92-1 231-100-4	01-2119513221-59 082-014-00-7	< 0,1	Lact.: H362 Repr. 1A: H360FD

Tin (Sn)	7440-31-5 231-141-8	01-2119486474-2	< 0,2	Not classified
Nickel (Ni)	7440-02-02 31-111-4	01-2119438727-29 028-002-00-7	< 0,3	Skin Sens. 1: H317 Carc. 2: H351 STOT RE 1: H372

* Not classified in massive form (https://echa.europa.eu/sv/registration-dossier/-/registered-dossier/15562/2/1/?documentUUID=cac88e19-42de-4de3-aef8-eff5d961019d)
** Not classified in massive form (https://echa.europa.eu/sv/registration-dossier/-/registered-dossier/16146/2/1/?documentUUID=4d64233cd4d6-43ef-a0ce-5866c93e3223)

Trace elements in alloy:	**Weight %**
Na and Sr	< 0,1

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4. First aid measures

4.1 Description of first aid measures

General: In the least doubt or if symptoms persist, seek medical attention.

Inhalation: Not relevant for normal use. In case of irritation caused by dust, move to fresh air.

Skin contact: Not relevant for normal use. Wash skin with water and mild detergent.

Eye contact: Not relevant for normal use. Rinse the eyes from dust and shavings with water or saline. If symptoms persist, consult doctor for medical assessment.

Ingestion: Not relevant for normal use.

4.2 Most important symptoms and effects, both acute and delayed

Contains Nickel, may produce an allergic reaction.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5. Firefighting measures

Flammable properties: The metal is not flammable, except in finely divided form. Fine particles can be formed during grinding, sawing and polishing.

5.1 Extinguishing media

Suitable extinguishing media: Use powder or dry sand.

Extinguishing media which must not be used for safety reasons: Do not use water or halon extinguishers.

5.2 Special hazards arising from the substance or mixture

Not any known.

5.3 Advice to firefighters

Wear self-contained breathing apparatus and full protective clothing.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid treatment that generates dust.

See section 8.

6.2 Environmental precautions

Avoid discharges to soil, water or air.

6.3 Methods and material for containment and cleaning up

Material in the form of dust should be collected in suitable containers. Dust can be vacuumed.

6.4 Reference to other sections

See advice in Section 8.
For waste disposal, see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Avoid handling that generates dust. Avoid ignition sources (eg welding) in areas with high dust concentration. Use local exhaust ventilation and good general ventilation when grinding, sawing and polishing

7.2 Conditions for safe storage, including any incompatibilities

Store the product dry.

7.3 Specific end use(s)

See Section 1.2.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Referring to the European Union. Data from Directive 98/24/EC and its amendments.

Ingredients	ppm	mg/m^3	Interval	Category	Notes
Manganese (Mn) and inorganic manganese compounds		0,2	8 hours	TWA	Inhalable fraction
Manganese (Mn) and inorganic manganese compounds		0,05	8 hours	TWA	Respirable fraction
Lead (Pb) and inorganic lead compounds		0,15	8 hours	TWA	
Tin (Sn) and inorganic tin compounds		2	8 hours	TWA	

8.2 Exposure control

8.2.1 Engineering controls

In normal handling of aluminum in solid form, none of the occupational exposure limits for the metals will be exceeded.

8.2.2 Personal protection

8.2.2.1 Eye protection: When sawing, grinding and polishing the product, eye protection should be used. If such work is performed, there should be access to eye wash.

8.2.2.2 Hand protection: Protective gloves should be used when handling the product. When sawing, grinding and polishing the product, wear protective gloves.

8.2.2.3 Respiratory protection: When sawing, grinding and polishing the product, particle filtering half mask according to EN149: 2001, Class FFP2, must be used. Use spot local exhaust ventilation when sawing, grinding and welding the product.

8.2.2.4 Thermal hazard

Not relevant.

8.2.3 Reduction of release to the environment

Not relevant under normal conditions.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a	**Physical state**	Solid
b	**Colour**	From grey to silver grey
c	**Odour/odour threshold**	Petroleum
d	**Melting point/Freezing point**	570-660 °C
e	**Initial boiling point/boiling range**	2 300-2 500 °C
f	**Flammability (solid, gas)**	No data available/not applicable
g	**Lower and upper explosion limit**	No data available/not applicable
h	**Flash point**	No data available/not applicable
i	**Auto-ignition temperature**	No data available/not applicable
j	**Decomposition temperature**	No data available/not applicable
k	**pH**	No data available/not applicable
l	**Kinematic viscosity**	No data available/not applicable
m	**Solubility**	No data available/not applicable
n	**Partition coefficient (n-octanol/water)**	No data available/not applicable
o	**Vapour pressure**	No data available/not applicable
p	**Density and/or relative density**	No data available/not applicable
q	**Relative vapour density**	No data available/not applicable
r	**Particle characteristics**	No data available/not applicable

9.2 Other information

9.2.1 Information with reagard to physical hazard classes

a	**Explosives**	No data available/not applicable
b	**Flammable gases**	No data available/not applicable
c	**Aerosols**	No data available/not applicable
d	**Oxidising gases**	No data available/not applicable
e	**Gases under pressure**	No data available/not applicable
f	**Flammable liquids**	No data available/not applicable
g	**Flammable solids**	No data available/not applicable
h	**Self-reactive substances and mixtures**	No data available/not applicable
i	**Pyroforic liquids**	No data available/not applicable
j	**Pyroforic solids**	No data available/not applicable
k	**Self-heating substances and mixtures**	No data available/not applicable
l	**Substances and mixtures, with emit flammable gases in contact with water**	No data available/not applicable
m	**Oxidising liquids**	No data available/not applicable
n	**Oxidising solids**	No data available/not applicable
o	**Organic peroxides**	No data available/not applicable
p	**Corrosive to metals**	No data available/not applicable
q	**Desensitised exploxives**	No data available/not applicable

9.2.2 Other safety characteristics

a	**Mechanical sensitivity**	No data available/not applicable
b	**Self-accelerating polymerisation temperature**	No data available/not applicable
c	**Formation of explosible dust/air mixtures**	No data available/not applicable
d	**Acid/alkaline reserve**	No data available/not applicable
e	**Evaporation rate**	No data available/not applicable
f	**Miscibility**	No data available/not applicable
g	**Conductivity**	No data available/not applicable
h	**Corrosiveness**	No data available/not applicable
i	**Gas group**	No data available/not applicable
j	**Redox potential**	No data available/not applicable
k	**Radical formation potential**	No data available/not applicable
l	**Photocatalytic properties**	No data available/not applicable

SECTION 10. Stability and reactivity

10.1 Reactivity

Stable under normal temperature conditions.

10.2 Chemical stability

Stable under normal temperature conditions.

10.3 Possibility of hazardous reactions

Avoid dust formation. At high dust concentrations, particles of the product suspended in the air can easily spread flames, generate severe pressure or explode. Both ignition sensitivity and explosion risk increase with reduced particle size.

10.4 Conditions to avoid

Acids, bases, oxidants, halogenated hydrocarbons and metal oxides (see below).

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Reaction with acid and base leads to the formation of flammable hydrogen (H2). Aluminum metal can react strongly with oxidizing agents, halogenated hydrocarbons and metal oxides with high heat generation.

Moist or wet product forms flammable hydrogen if it is added to molten aluminum due to water decomposition

SECTION 11. Toxicological information

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

Not classified as hazardous to health. No toxicological tests have been performed on the product.
Contains Nickel, may produce an allergic reaction.

General toxicological information

There is no toxicological information about the product.

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity:	Not classified
Skin corrosion/irritation:	Not classified
Serious eye damage/eye irritation:	Causes serious eye irritation.
Respiratory or skin sensitization:	Not classified (Contains Nickel, may produce an allergic reaction),
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified, (Contains Nickel, suspected of causing cancer),
Reproductive toxicity:	Not classified, (Contains lead, may cause reproductive toxicity).
STOT – single exposure:	Not classified

STOT – repeated exposure: Not classified, (Contains Nickel, cause damage to organs through prolonged or repeated exposure)

Aspiration hazard: Not classified

11.2 Information on other hazards

Contains lead in unclassified amount which may have endocrine disrupted properties.

SECTION 12. Ecological information

12.1 Toxicity

Not classified as hazardous to the environment.
No toxicological tests have been performed on the product.

12.2 Persistence and degradability

Aluminum has very limited mobility in the environment under normal ambient conditions. The product consists of elements.

12.3 Bioaccumulative potential

The product is not bioaccumulative.

12.4 Mobility in soil

The product is not soluble in water.

12.5 Results of PBT and vPvB assessment

The product is not toxic or bioaccumulative.

12.6 Endocrine disrupted properties

Contains lead in unclassified amount which may have endocrine disrupted properties.

12.7 Other adverse effects

No data available.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Aluminum scrap must be recycled. Dispose according to Directive 2008/98/EC on waste (Waste Framework Directive) and in compliance with local and national legislation. Do not allow to enter sewers. Transfer to a waste container and send for destruction.

SECTION 14. Transport information

14.1 UN number

Not dangerous goods according to RID, ADR, ADN, IMDG and ICAO/IATA

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packaging group

14.5 Environmental hazards

14.6 Special precautions for user

14.7 Transport in bulk according to Annex I of MARPOL

Not applicable

SECTION 15. Regulatory information

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

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.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning 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.

Occupational Exposure Limits

According to EH40/2005 Workplace exposure limits.

15.2 Chemical safety assessment

Has not been performed.

SECTION 16. Other information

Revision summary
Earlier revisions:

2018-12-21	Updating of classification information in Section 3 and updates according extended legal requirements.

Explanations to abbreviations in Section 3

Lact.	Reproductive toxicity (Tilläggskategori för effekter på eller via anmning)
Repr. 1A	Reproductive toxicity (Category 1A)
Skin Sens. 1	Skin sensitization (Category 1)
Carc. 2	Carcinogenicity (Category 2)
STOT RE 1	Specific target organ toxicity – repeated exposure (Category 1)

H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.

Explanations to abbreviations in Section 14

ADR	Agreement Concerning the International Carriage of Dangerous Goods by Road
RID	Règlement concernant le transport international ferroviaire de marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by rail)
IMDG	IMDG code (International Maritime Dangerous Goods Code)
ICAO	International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IATA	International Air Transport Association

This safety data sheet has been produced according to REACH (EG) No 1907/2006, Article 31.

This safety data sheet has been developed by Chemgroup Scandinavia AB.