

1.) Identification of the substance/mixture and of the company/undertaking

Trade name

Aluminium Granules

Product identifier

Substance name aluminium
 REACH registration no. 01-2119529243-45-0084

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

Relevant identified uses of the substance or mixture

Metallurgy industry (aluminothermic procedure)

Details of the supplier of the safety data sheet

Address

Timna Copper Mine Ltd
 DOAR NA
 EILOT ISRAEL 88000
 Telephone no. 972-8-6374171
 Fax no. 972-8-6374174

Information provided by / telephone

972-8-6374171

Emergency telephone

For medical advice (in German and English):
 +49 (0)551 192 40 (Giftinformationszentrum Nord)

Advice on Safety Data Sheet

timna@timna.co.il

2.) Hazards identification

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).

3.) Composition / information on ingredients

Chemical characterization

aluminium

Substance / product identification

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

4.) First aid measures

General information

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

After inhalation

Ensure supply of fresh air.

After skin contact

Wash off immediately with soap and water.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.).

After ingestion

Seek medical advice immediately. Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person.

5.) Fire-fighting measures

Suitable extinguishing media

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

In the event of fire, the following can be released: Fumes of metal oxides

Special protective equipment for fire-fighters

Use self-contained breathing apparatus. Wear protective clothing.

6.) Accidental release measures

Personal precautions

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Avoid dust formation. Keep away sources of ignition.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up/taking up

Scoop-up mechanically. Send in suitable containers for recovery or disposal. Dusts must be attracted with little of water and collected with care.

7.) Handling and storage

Handling

Advice on safe handling

Avoid the formation and deposition of dust. Provide good ventilation of working area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of heat and ignition.

Storage

Requirements for storage rooms and vessels

Keep only in the original container.

Advice on storage assembly

Do not store together with oxidizing agents.

Further information on storage conditions

Keep container dry in a cool, well-ventilated place.

8.) Exposure controls / personal protection

Exposure limit values

aluminium

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

List of approved workplace exposure limits (WELs) / EH40

Aluminium metal			
inhalable dust			
TWA	10	mg/m ³	

Other information on the limit values

Result of the chemical safety assessment of aluminium:

DNEL for workers:

DNEL inhalation long term, local effects: 3,72 mg/m³

DNEL for general population:

DNEL oral long term, systemic effects: 3,95 mg/kg/d

PNEC water: 74,9 – 17800 µg/l

PNEC STP: 20 mg/l sewage treatment plant

Exposure controls

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn.

Particle filter P2

Hand protection

In case of intensive contact, wear protective gloves (EN 374). Before use, the protective glove 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.

Eye protection

Tightly fitting safety glasses (EN 166).

Skin protection

Normal chemical work clothing.

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. Provide eye wash fountain in work area. Do not inhale dust. Avoid product contact with skin, eyes and clothing

9.) Physical and chemical properties

General information

Form	granules
Colour	silver-grey
Odour	odourless

Important health, safety and environmental information

Changes in physical state

Type	Melting point	
Value	660	°C
Type	Boiling point	
Value	2450	°C

Flash point

Remarks not applicable

Explosion limits

Risk of explosion Boundary of explosion is according to the granular size.

Vapour pressure

Value	0,0013		hPa
Reference temperature	974	°C	

Density

Value	2,7		g/ml
Reference temperature	20	°C	

Solubility in water

Remarks insoluble

pH value
Remarks not applicable

10.) Stability and reactivity

Conditions to avoid

None known

Materials to avoid

Oxidizing agents

Hazardous decomposition products

No hazardous decomposition products known.

Thermal decomposition

Remarks No decomposition if used as prescribed.

11.) Toxicological information

Acute toxicity

Acute oral toxicity

LD50 > 15900 mg/kg
Species rats (male/female)
Method OECD 401
Source CSR

Acute dermal toxicity

Remarks No data available.

Acute inhalational toxicity

LC50 0,888 mg/l
Duration of exposure 4 h
Species rat (male)
Method OECD 403
Source CSR

Irritant/corrosive effects

Irritant effect on skin

Species rabbit
Evaluation non-irritant
Method OECD 404
Source CSR

Irritant effect on eyes

Species rabbit
Evaluation non-irritant
Source CSR

Sensitisation

Species guinea pig
Evaluation non-sensitizing
Source CSR

Effects after repeated or prolonged exposition (subacute, subchronic, chronic)

Type of examination NOAEL
Route of exposure oral
Species rat
Duration of exposure 1 d
Value 30 mg/kg
Source CSR

Experience in practice

Inhalation of dusts may irritate the respiratory tract. Eye contact may cause mechanical irritation through dust particles. When handled appropriately adverse health effects are not to be expected.

12.) Ecological information

Ecotoxicity

Fish toxicity

LC50	> 218,65	mg/l
Species	Pimephales promelas	
Duration of exposure	96 h	
Source	CSR	
Reference substance	aluminium chloride	

Daphnia toxicity

EC10	0,668	mg/l
Species	Daphnia magna	
Duration of exposure	21 d	
Method	OECD 211	
Source	CSR	

Algae toxicity

EC50	1,35	mg/l
Species	Pseudokirchneriella subcapitata	
Duration of exposure	72 h	
Method	OECD 201	
Source	CSR	

Other information

Do not discharge into the drains or waters and do not store on public depositories.

13.) Disposal considerations

Product

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

Residuals 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.

14.) Transport information

Other information

The product is not defined under national/international road, rail, sea and air transport regulations as a hazardous material.

15.) Regulatory information

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

EU regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

16.) Other information

Sources of key data used to compile the data sheet:

- EC Directive 67/548/EC resp. 99/45/EC as amended in each case.
- Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.
- EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC
- 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 chapter.

Department issuing safety data sheet

UMCO Umwelt Consult GmbH

Georg-Wilhelm-Str. 183 b, D-21107 Hamburg

Tel.: +49 40 / 41 92 13 00 Fax: +49 40 / 41 92 13 57 e-mail: umco@umco.de

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.