Safety data sheet
according to Regulation (EC) No. 1907/2006

Printing date 05.03.2014 Version number 3 Revision: 05.03.2014

*
1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: ALUMINIUM ≥ 99.5%, powdered, <160µm

Article number: 5285

CAS Number:
7429-90-5
EC number:
231-072-3

Index number:
013-002-00-1

Registration number 01-2119529243-45-XXXX

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

Application of the substance / the mixture Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Carl Roth GmbH + Co. KG
Schoemperlenstraße 3-5
76185 Karlsruhe
Germany
Telefon: +49/(0)721 5606-0 Telefax: +49/(0)721 5606-149 E-Mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:
Poison Centre Munich Telefon +49/(0)89 19240

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2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Sol. 1 H228 Flammable solid.

Water-react. 2 H261 In contact with water releases flammable gases.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
F; Highly flammable

R11-15: Highly flammable. Contact with water liberates extremely flammable gases.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02

Signal word Danger

Hazard statements
H228 Flammable solid.

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H261 In contact with water releases flammable gases.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P370+P378 In case of fire: Use for extinction: Dry sand.
P402+P404 Store in a dry place. Store in a closed container.

Additional information:
-

2.3 Other hazards
All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

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3 Composition/information on ingredients

3.1 Chemical characterization: Substances

CAS No. Description
7429-90-5 aluminium powder (stabilized)

Identification number(s)
EC number: 231-072-3
Index Number: 013-002-00-1
Formula: Al
Molar mass [g/mol]: 26,98

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4 First aid measures

4.1 Description of first aid measures

After inhalation:
After inhalation of dusts:
Supply fresh air; if there is any trouble seek medical help.

After skin contact:
Generally the product does not irritate the skin.

After eye contact:
To be sure rinse opened eye under running water.

After swallowing:
Rinse out mouth and then drink water.
If there is any trouble seek medical help.

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

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

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5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:
Special powder for metal fires. Do not use water.
Dry sand
Cement

For safety reasons unsuitable extinguishing agents:
Water
Foam
Carbon dioxide

5.2 Special hazards arising from the substance or mixture
Flammable solid.
Danger of dust explosion.
In contact with water product releases hydrogen.

5.3 Advice for firefighters

Protective equipment:
Wear self-contained respiratory protective device.

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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 product to reach sewage system or any water course.
Avoid penetration into drainage system because of danger of explosion.

6.3 Methods and material for containment and cleaning up
Pick up mechanically.
Keep away from water.
Dispose of the material collected according to regulations.
Ensure adequate ventilation.

6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7 Handling and storage

7.1 Precautions for safe handling
Thorough dedusting.
Keep workplace dry.
Ensure that suitable extractors are available on processing machines
Any unavoidabledeposit of dust must be regularly removed.

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Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:
Store only in the original receptacle.

Information about storage in one common storage facility:
Keep away from watery solutions.
Store away from foodstuffs.
Do not store together with substances with which dangerous reactions are possible (s. section 10).

Further information about storage conditions:
Keep container tightly sealed.
Store in dry conditions.
Keep away from sources of ignition and heat.

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)
No further relevant information available.

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8 Exposure controls/personal protection

Additional information about design of technical facilities:
No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
7429-90-5 aluminium powder (stabilized)	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *inhalable dust **respirable dust

Additional information:
The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
Do not eat, drink or smoke while working.
Wash hands before breaks and at the end of work.

Individual protection measures
Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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Respiratory protection:

When dusts are generated: protective device filter P2.

Protection of hands:

Protective gloves
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
Nitrile, thickness: ≥ 0.11 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material
Value for the permeation: Level ≥ 6
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:
Nitrile, thickness: ≥ 0.11 mm
Value for the permeation: Level ≥ 6

Eye protection:

Tightly sealed goggles

Body protection:
Protective work clothing

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9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Appearance:	
Form:	Powder
Colour:	metallic
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	No information available.
Change in condition	
Melting point/Melting range:	ca. 66 °C
Boiling point/Boiling range:	ca. 2500 °C

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Flash point:	No information available
Flammability (solid, gaseous):	Flammable solid. Contact with water liberates extremely flammable gases.
Ignition temperature:	~ 400 °C
Decomposition temperature:	No information available
Self-igniting:	No information available
Danger of explosion:	Not classified als explosive.
Explosion limits:	
Lower:	No information available.
Upper:	No information available.
Oxidizing properties:	No information available.
Vapour pressure:	No information available
Density at 20 °C:	2.7 g/cm³
Vapour density	No information available
Evaporation rate	No information available
Solubility in / Miscibility with water:	Reaction.
Partition coefficient (n-octanol/water):	No information available
Viscosity:	
Dynamic:	No information available.
Kinematic:	No information available.
9.2 Other information	No further relevant information available.

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10 Stability and reactivity

10.1 Reactivity
Risk of dust explosion.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Danger of explosion with:
water
ammonium compounds
nitrates
Peroxides
metallic oxides
Dichloromethane
Strong oxidizing agents
Risk of ignition or formation of inflammable gases or vapors with:
Formic acid
alkali hydroxides
Alcohol
halogen-halogen compounds
ferric oxide
nitrogen oxides
carbon disulfide

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sulphuric acid
Exothermic reaction with:
halogens
phosphorus
Sulfur
Sulphides

10.4 Conditions to avoid
Avoid contact with moisture.

10.5 Incompatible materials:
No information available.

10.6 Hazardous decomposition products:
In case of fire: see item 5.

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11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:
Quantitative data on the toxicity of this product are not available.

Primary irritant effect:

on the skin:
Prolonged or repeated contact may cause skin irritations.

on the eye:
Intense exposure may cause irritative symptoms.

after inhalation:
Intensive contact with dusts may lead to irritations of the eyes and the respiratory tract.

Sensitization:
No sensitizing effects known.

CMR effects:
Germ cell mutagenicity:
No information available.
Carcinogenicity:
No information available.
Reproductive toxicity:
No information available.

Aspiration hazard:
Not applicable.

Specific target organ toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Additional toxicological information:
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

Further information:
The product should be handled with the care usual when dealing with chemicals.

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12 Ecological information

12.1 Toxicity

Aquatic toxicity:
Quantitative data on the ecological effect of this product are not available.

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

Ecotoxical effects:

Remark:
Product reacts with water.
Do not allow to enter waters, waste water, or soil!

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects
No further relevant information available.

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13 Disposal considerations

Waste treatment methods

Recommendation
This material and its container must be disposed of as hazardous waste.
The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation:
Disposal according to official regulations.

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14 Transport information

14.1 UN-Number	
ADR, IMDG, IATA	UN1309
14.2 UN proper shipping name	
ADR	1309 ALUMINIUM POWDER, COATED
IMDG, IATA	ALUMINIUM POWDER, COATED

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14.3 Transport hazard class(es)

ADR, IMDG, IATA

Class	4,1
Label	4.1

14.4 Packing group

ADR, IMDG, IATA	III

14.5 Environmental hazards:

Marine pollutant:	No

14.6 Special precautions for user	Not applicable.
Danger code (Kemler):	40
EMS Number:	F-G,S-G

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	Not subject to transport regulations.

ADR	
Limited quantities (LQ)	5 kg
Transport category	3
Tunnel restriction code	E

UN "Model Regulation":	UN1309, ALUMINIUM POWDER, COATED, 4.1, III

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15 Regulatory information

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

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Breakdown regulations:

Waterhazard class:
Generally not hazardous for water (German regulation).

Other regulations, limitations and prohibitive regulations
Temperature class: T2

15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

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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.

Department issuing MSDS: Department: Health, Safety and Environment

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Contact: Frau Weckemann

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
LD50*: Lethal Dose, 50 percent (Not relevant for classification)
LD50*: Lethal Concentration, 50 percent (Not relevant for classification)
Flam. Sol. 1: Flammable solids, Hazard Category 1
Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

*** Data compared to the previous version altered.**