

Safety data sheet in accordance with 1907/2006/EC



Trade name: ALUMINIUM POWDER atomized

Version: 2 / GB

Status: 07.01.2015

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

Trade name

ALUMINIUM POWDER atomized

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

Relevant identified uses of the substance or mixture

Refractory
Powder metallurgy
Coatings
Ink
Colourant
Metallurgical uses
Tools manufacturing

Details of the supplier of the safety data sheet

Address

Toyal Europe
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F-64490 ACCOUS

Telephone no. +33 (0)5 59 98 35 56

Fax no. +33 (0)5 59 98 35 36

Emergency telephone

For medical advice:

+33 (0)1 40 05 48 48 (Anti Poison Center Paris)

In case of transport incidents and other emergencies: Emergency CONTACT (24-Hour-Number)

GBK/Infotrac ID 103679: (USA domestic) 1 800 535 5053 or international (001) 352 323 3500

Advice on Safety Data Sheet

reach@toyal-europe.com

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).

The classification of the product according to Regulation (EC) 1272/2008 (CLP) corresponds to Annex VI, Note T.

3.) Composition / information on ingredients

Chemical characterization

aluminium powder

Substance / product identification

CAS no. 7429-90-5 Reach n° : 01-2119529243-45-0203

EC no. 231-072-3

Formula Al

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

Remove affected person from the immediate area. 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

Rinse mouth thoroughly with water. Seek medical advice immediately. Never give anything by mouth to an unconscious person.

5.) Fire-fighting measures

Suitable extinguishing media

Dry sand; Metal fire powders

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Extinguishing media that must not be used for safety reasons

Water; Carbon dioxide; Foam; Halones; ABC powder

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

In case of contact with acidic or alkaline (basic) media as well as water, aluminium powder will react under hydrogen formation.

Special protective equipment for fire-fighters

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Do not disperse and dissipate dust – explosion hazard!

6.) Accidental release measures

Personal precautions

Refer to protective measures listed in sections 7 and 8. 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

Mechanisch aufnehmen. When picked up, treat material as prescribed under heading "Disposal considerations".

Additional informations (chapter 6)

Do not collect residues using a non explosion-proof vacuum cleaner – Explosion hazard!

7.) Handling and storage

Handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation, if necessary). Avoid the formation and deposition of dust. Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far it is possible by the state of the art.

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. Use explosion-proof equipment/fittings and non-sparking tools.

Storage

Requirements for storage rooms and vessels

Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container.

Advice on storage assembly

Do not store together with: Oxidizing agents; Acids; Alkalies; Nitrates; Alcohols; Halogenated hydrocarbons; Halogens; Keep away from water.

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place. Keep dry. Humidity penetration (water) into closed containers may lead to pressure increase and bursting of the container.

8.) Exposure controls / personal protection

Exposure limit values

aluminium powder

CAS no. 7429-90-5

EC no. 231-072-3

List of approved workplace exposure limits (WELs) / EH40

Aluminium metal
total inhalable dust

TWA 10 mg/m³

List of approved workplace exposure limits (WELs) / EH40

Aluminium metal
respirable dust

TWA 4 mg/m³

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

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Exposure controls

Personal protective equipment

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respirator FFP2 / FFP3 (EN 149:2001)

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. 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

Safety glasses with side protection shield (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. Avoid contact with eyes and skin. Do not inhale dust.

9.) Physical and chemical properties

General information

Form	Powder
Colour	silver-grey
Odour	odourless

Important health, safety and environmental information

Changes in physical state

Type	Melting point		
Value	appr.	660	°C
Pressure	1013	hPa	
Type	Boiling temperature		
Value		2450	°C
Pressure	1013	hPa	

Flash point

Remarks not applicable

Oxidising properties

Remarks According to the conclusions of the Chemical Safety Report (CSR) the product does not meet the classification and labelling criteria for oxidising gases, liquids and solids given in the Regulation (EG) Nr. 1272/2008 (CLP), Annex, part 2.

Vapour pressure

Value	0,0013	hPa
Reference temperature	974	°C

Density

Value	appr.	2,70	g/cm ³
Reference substance	Aluminium (Metal)		
Reference temperature	20	°C	
Value	0,70	- 1,50	g/cm ³
Reference substance	Aluminium (powder)		
Reference temperature	20	°C	

Solubility in water

Value	0,0002	g/l
Reference temperature	20	°C

Flammability

Remarks The product is NOT highly flammable according to Regulation (EG) Nr. 440/2008, method EC A.10 (flammability, solids); The product is NOT highly flammable according to Regulation (EC) Nr. 440/2008, method EC A.12 (contact with water).

10.) Stability and reactivity

Conditions to avoid

Moisture; Heat; Exothermal reactions are possible in the event of contact with incompatible substances.

Materials to avoid

Oxidizing agents; Acids; Alkalies; Nitrates; Alcohols; Halogenated hydrocarbons; Halogens; Water



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Hazardous decomposition products

In case of contact with acidic or alkaline (basic) media as well as water, aluminium powder will react under hydrogen formation.

11.) Toxicological information

Acute toxicity

Acute oral toxicity

LD50	>	2000	mg/kg
Species	rat		
Method	OECD 423		

Acute dermal toxicity

Remarks Due to its insolubility it can be assumed that aluminium will not be absorbed via skin.

Acute inhalational toxicity

LC50	>	888	mg/m ³
Species	rat		
Method	OECD 403		
NOAEC		10	mg/m ³
Species	rat		

Irritant/corrosive effects

Irritant effect on skin

Evaluation	non-irritant
Method	OECD 404

Irritant effect on eyes

Evaluation	non-irritant
Method	OECD 405

Respiratory tract irritation

Evaluation	non-irritant
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Sensitisation

Evaluation	non-sensitizing
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Effects after repeated or prolonged exposition (subacute, subchronic, chronic)

Type of examination	NOAEL		
Route of exposure	oral		
Species	rat		
Value	30	mg/kg	
Type of examination	LOAEC		
Route of exposure	inhalational		
Species	rat		
Value	50	mg/m ³	

Mutagenicity

According to the conclusions of the Chemical Safety Report (CSR) the product is not subject to classification and labelling in compliance with Regulation (EG) Nr. 1272/2008 (CLP), Annex, part 3.

Reproduction toxicity

According to the conclusions of the Chemical Safety Report (CSR) the product is not subject to classification and labelling in compliance with Regulation (EG) Nr. 1272/2008 (CLP), Annex, part 3.

Carcinogenicity

According to the conclusions of the Chemical Safety Report (CSR) the product is not subject to classification and labelling in compliance with Regulation (EG) Nr. 1272/2008 (CLP), Annex, part 3.

Experience in practice

Repeated and prolonged exposure to high dust concentrations may lead to irritation of the respiratory tract. Eye contact may cause mechanical irritation through dust particles.

12.) Ecological information

Results of PBT and vPvB assessment

PBT assessment

The product is not considered to be a PBT.

vPvB assessment

The product is not considered to be a vPvB.

Other information

According to the conclusions of the Chemical Safety Report (CSR) the product is not subject to classification and labelling in compliance with Regulation (EG) Nr. 1272/2008 (CLP), Annex, part 4.

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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

QSE Department Toyal Europe

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.