

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**  
Version: **1.0 en**

date of compilation: 2017-01-17

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Identification of the substance	<b>Aluminium carbide</b>
Article number	3094
Registration number (REACH)	This information is not available.
EC number	215-076-2
CAS number	1299-86-1

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

**Identified uses:** laboratory chemical

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

**e-mail (competent person)** : [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 (CLP)**

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
2.12	substance and mixture which, in contact with water, emits flammable gas	(Water-react. 2)	H261
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Irrit. 2)	H319
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	(STOT SE 3)	H335

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**

### Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP)

#### Signal word

**Danger**

#### Pictograms



#### Hazard statements

H261	In contact with water releases flammable gases.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

#### Precautionary statements

##### Precautionary statements - prevention

P223	Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P280	Wear protective gloves/eye protection.

##### Precautionary statements - response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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##### Precautionary statements - storage

P402+P404	Store in a dry place. Store in a closed container.
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#### Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



## 2.3 Other hazards

There is no additional information.

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: 3094

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Name of substance	Aluminium carbide
EC number	215-076-2
CAS number	1299-86-1
Molecular formula	$\text{Al}_4\text{C}_3$
Molar mass	144 g/mol

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures



##### General notes

Take off contaminated clothing.

##### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

##### Following skin contact

Brush off loose particles from skin. Rinse skin with water/shower. In case of skin irritation, consult a physician.

##### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

##### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Irritation, Cough, Dyspnoea

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

none

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings  
fire extinguishing powder, dry sand, Limestone powder

##### Unsuitable extinguishing media

water

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: 3094

### 5.2 Special hazards arising from the substance or mixture

Water-reactive (in contact with water releases flammable gases)-> Methane.

#### Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe dust. Avoid contact with skin, eyes and clothes.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

### 6.3 Methods and material for containment and cleaning up

#### Advices on how to contain a spill

Covering of drains.

#### Advices on how to clean up a spill

Take up mechanically. Control of dust. Take up carefully when dry.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

#### Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8.

Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation.

#### • Measures to prevent fire as well as aerosol and dust generation

Avoidance of ignition sources. Removal of dust deposits.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

#### Incompatible substances or mixtures

Observe hints for combined storage. Do not allow contact with water.

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: 3094

### Consideration of other advice

- **Ventilation requirements**

Use local and general ventilation.

- **Specific designs for storage rooms or vessels**

Recommended storage temperature: 15 - 25 °C.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [mg/m <sup>3</sup> ]	STEL [mg/m <sup>3</sup> ]	Source
GB	dust		i	WEL	10		EH40/2005
GB	dust		r	WEL	4		EH40/2005

#### Notation

i Inhalable fraction

r Respirable fraction

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)



#### Eye/face protection

Use safety goggles with side protection.

#### Skin protection

- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### **Respiratory protection**

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

### **Environmental exposure controls**

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### **Appearance**

Physical state	solid (powder)
Colour	dark grey
Odour	odourless
Odour threshold	No data available

#### **Other physical and chemical parameters**

pH (value)	7 - 8 (100 g/l, 20 °C)
Melting point/freezing point	not determined
Initial boiling point and boiling range	2.100 °C
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	Non-flammable
<u>Explosive limits</u>	
• lower explosion limit (LEL)	this information is not available
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	these information are not available
Vapour pressure	This information is not available.
Density	2,36 g/cm <sup>3</sup> at 20 °C
Vapour density	This information is not available.
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	no data available

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**

### Partition coefficient

n-octanol/water (log KOW)

This information is not available.

Auto-ignition temperature

Information on this property is not available.

Decomposition temperature

no data available

Viscosity

not relevant (solid matter)

Explosive properties

Shall not be classified as explosive

Oxidising properties

none

### 9.2 Other information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Risk of ignition.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Violent reaction with: Acids, Strong oxidiser, Water

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Methane.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### **Acute toxicity**

Shall not be classified as acutely toxic.

#### **Skin corrosion/irritation**

Causes skin irritation.

#### **Serious eye damage/eye irritation**

Causes serious eye irritation.

#### **Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

#### **Summary of evaluation of the CMR properties**

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**

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- **Specific target organ toxicity - single exposure**

May cause respiratory irritation.

- **Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure).

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

- **If swallowed**

data are not available

- **If in eyes**

data are not available

- **If inhaled**

data are not available

- **If on skin**

causes skin irritation

**Other information**

None

## SECTION 12: Ecological information

**12.1 Toxicity**

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

**12.2 Process of degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

Data are not available.

**12.4 Mobility in soil**

Data are not available.

**12.5 Results of PBT and vPvB assessment**

Data are not available.

**12.6 Other adverse effects**

Data are not available.

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Sewage disposal-relevant information

Do not empty into drains.

##### Waste treatment of containers/packageings

It is a dangerous waste; only packageings which are approved (e.g. acc. to ADR) may be used.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

14.1	UN number	1394
14.2	UN proper shipping name	ALUMINIUM CARBIDE
	Hazardous ingredients	Aluminium carbide
14.3	Transport hazard class(es)	
	Class	4.3 (substances which, in contact with water, emit flammable gases)
14.4	Packing group	II (substance presenting medium danger)
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulations	
	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	
	UN number	1394
	Proper shipping name	ALUMINIUM CARBIDE
	Particulars in the transport document	UN1394, ALUMINIUM CARBIDE, 4.3, II, (D/E)
	Class	4.3
	Classification code	W2
	Packing group	II
	Danger label(s)	4.3

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**



Excepted quantities (EQ)	E2
Limited quantities (LQ)	500 g
Transport category (TC)	2
Tunnel restriction code (TRC)	D/E
Hazard identification No	423
<b>Emergency Action Code</b>	4W
<b>• International Maritime Dangerous Goods Code (IMDG)</b>	
UN number	1394
Proper shipping name	ALUMINIUM CARBIDE
Particulars in the shipper's declaration	UN1394, ALUMINIUM CARBIDE, 4.3, II
Class	4.3
Packing group	II
Danger label(s)	4.3



Special provisions (SP)	-
Excepted quantities (EQ)	E2
Limited quantities (LQ)	500 g
EmS	F-G, S-N
Stowage category	A
<b>• International Civil Aviation Organization (ICAO-IATA/DGR)</b>	
UN number	1394
Proper shipping name	Aluminium carbide
Particulars in the shipper's declaration	UN1394, Aluminium carbide, 4.3, II
Class	4.3
Packing group	II
	4.3



Excepted quantities (EQ)	E2
Limited quantities (LQ)	5 kg

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: 3094

### SECTION 15: Regulatory information

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

##### Relevant provisions of the European Union (EU)

- **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

Not listed.

- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

Not listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

Not listed.

- **List of substances subject to authorisation (REACH, Annex XIV)**

not listed

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

not listed

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

not listed

**Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

not listed

##### National inventories

Substance is listed in the following national inventories:

- EINECS/ELINCS/NLP (Europe)

#### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

### SECTION 16: Other information

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DGR	Dangerous Goods Regulations (see IATA/DGR)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Aluminium carbide pure

article number: **3094**

Abbr.	Descriptions of used abbreviations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	short-term exposure limit
TWA	time-weighted average
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit

### Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H261	in contact with water releases flammable gases
H315	causes skin irritation
H319	causes serious eye irritation
H335	may cause respiratory irritation

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.