

SECURITY DATASHEET- GB

1. Identification of the substance or preparation and of the Company

1.1 Product identifier

Calcium carbide ampoules

REACH registration number: 01-2119484719-18-0000

1.2 Relevant, identified uses of the substance/preparation and uses which aren't recommended

Identified uses of the substance/preparation:	Manufacture of basic metals. Manufacture of bulk, large scale chemicals (including petroleum products) Manufacture of fine chemicals. The product is intended for research, analysis and scientific education.
Not recommended uses of the substance/preparation:	none

1.5 Dept. responsible for information

Abteilung Arbeitssicherheit und Umweltschutz

2. Hazards identification

2.1 Classification of the substance/preparation

Substances and mixtures which in contact with water emit flammable gases: Water-react. 1
Serious eye damage / eye irritation: Eye Dam. 1

2.2 Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms:



Signal word:	GHS02, GHS05, GHS07 Danger
H phrases:	280 In contact with water releases flammable gases which may ignite spontaneously 315 Causes skin irritation 318 Causes serious eye damage 335 May cause respiratory irritation
P phrases:	101 If medical advice is needed, have product container or label at hand. 102 Keep out of reach of children. 103 Read label before use. 223 Keep away from any possible contact with water, because of violent reaction and possible flash fire. 231+232 Handle under inert gas. Protect from moisture. 281 Avoid breathing dust/fume/gas/mist/vapours/spray. 284 Wash hands thoroughly after handling. 271 Use only outdoors or in a well-ventilated area. 280 Wear protective gloves/protective clothing/eye protection/face protection. 302+352 IF ON SKIN: Wash with plenty of soap and water. 304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 310 Immediately call a POISON CENTER or doctor/physician. 312 Call a POISON CENTER or doctor/physician if you feel unwell. 321 Specific treatment (see information on this label). 332+313 If skin irritation occurs: Get medical advice/attention. 335+334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. 382 Take off contaminated clothing and wash before reuse. 370+378 In case of fire: Use sand for extinction. 402+404 Store in a dry place. Store in a closed container. 403+233 Store in a well-ventilated place. Keep container tightly closed. 405 Store locked up. 501 Dispose of contents/container to disposal.

2.3 Labelling according to Directive 67/548/EEC

Hazard symbols:



	F	Highly flammable.
	Xi	Irritant.
R phrases:	15	Contact with water liberates highly flammable gas.
	41	Risk of serious damage to eyes.
S phrases:	1/2	Keep locked up and out of the reach of children.
	7/8	Keep container tightly closed and dry.
	22	Do not breathe dust.
	24	Avoid contact with skin.
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	39	Wear eye/face protection.
	43	In case of fire, use sand.
	45	In case of accident or if you feel unwell, seek medical advice immediately (show this label if possible).
	48	If swallowed, seek medical advice immediately and show this container or label.

2.4 Additional critical hazard to man and environment

See attached safety data sheets and/or usage instructions.

3. Composition/information on ingredients

3.1 Chemical characterization

Ampoule filled with calcium carbide. Contaminated with Calcium oxide, among other things.

3.2 Composition of the substance/preparation

Calcium carbide

EC-no.: 200-848-3

CAS-No.: 75-20-7

INDEX no.: 008-004-00-9

REACH-no.: 01-2119494719-18-0000

Concentration: > 80 Wt -%

Classification: Regulation (EC) No 1272/2008: [GHS02]
[H260]

Directive 67/548/EEC: [F]
[R15]

Calcium oxide

EC-no.: 215-138-9

CAS-No.: 1305-78-8

INDEX no.:

REACH-no.: 01-2119475325-36-0000

Concentration: < 15 Wt -%

Classification: Regulation (EC) No 1272/2008: [GHS05]
[H314]

Directive 67/548/EEC: [C]
[R34]

Ingredients with EC exposure limits

(The wording of the listed risk phrases is given in Chapter 16)

3.3 Additional information

Contact with water liberates highly flammable gas.

4. First aid measures

4.1 Description of the first aid measures

General information:	In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible). Take off immediately all contaminated clothing.
Following inhalation:	Move victim to fresh air. Put victim at rest and keep warm. In case of irregular breathing or respiratory arrest provide artificial respiration. Immediately get medical attention.
After skin contact:	After contact with skin, wash immediately with plenty of water and soap. Immerse in cold water for a prolonged period. Immediately get medical attention.
Following eye contact:	In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
After ingestion:	Rinse mouth immediately and drink large quantities of water. No administration in cases of unconsciousness or cramps. Do not induce vomiting. Immediately get medical attention.
Self-protection:	First aid assistant: Pay attention to self-protection!

4.2 Major acute and delayed occurring symptoms and dangers

Symptoms:	No symptoms known up to now.
Nature of Hazard:	Causes burns.

4.3 Information on emergency aid or special treatment

Emergency aid:	Let water be swallowed in little sips (dilution effect). Immerse in cold water for a prolonged period.
Treatment:	Treat symptomatically.

5. Fire fighting measures

5.1 General information

Move undamaged containers from immediate hazard area if it can be done safely.

5.2 Extinguishing media

Suitable:	Dry sand. Dry extinguishing powder. Limestone powder.
Unsuitable:	Water fog. High power water jet. Water. Foam. Carbon dioxide (CO ₂).

5.3 Special exposure hazards arising from the substance/preparation

Contact with water liberates highly flammable gas. Can be released in case of fire: Pyrolysis products, toxic. Carbon dioxide. Carbon monoxide.

5.4 Instructions for fire fighting

Special protective equipment for fire-fighters

In case of fire: Use acid-proof equipment only. Wear a self-contained breathing apparatus and chemical resistant suit.

Additional information
none

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Remove all sources of ignition. Guide people to safety. Wear personal protection equipment.

6.2 Environmental precautions

Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

6.3 Methods and materials for retention and cleaning up

Remove mechanically, placing in appropriate containers for disposal. Treat the assimilated material according to the section on waste disposal. Avoid generation of dust. Clear contaminated area thoroughly. Avoid contact with water. Do not rinse down with water.

6.4 References to other sections

See protective measures under point 7 and 8.

7. Handling and storage

7.1 Safety measures for safe handling

Information for safe handling

Use only in well-ventilated areas. Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Avoid generation of dust. Do not breathe dust.

Technical measures

Provide for sufficient ventilation and punctiform suction at critical points.

Precautions against fire and explosion

Take precautionary measures against static discharges. Never add water to this product. Before opening the container prepare fire extinguisher.

Additional information

Contact with water liberates highly flammable gas.

7.2 Conditions for safe storage

Technical measures and storage conditions

Ensure adequate ventilation of the storage area.

Packaging materials

Keep/Store only in original container.

Requirements for storerooms and containers

Keep container tightly closed in a cool, well-ventilated place. Keep the packing dry and well sealed to prevent contamination and absorption of dampness.

Information about storing together in storage facility

Do not store together with: Water. Oxidizing agents. acid. alkali metal. Keep away from food, drink and animal feedingstuffs.

Further information concerning storage conditions

Protect against: heat. Water.

Storage class: 4.3 Substances that form flammable gases in contact with water.

7.3 Specific use(s)

Observe instructions for use.

8. Exposure controls / Personal protection equipment

8.1 Parameters to control

Exposure limit values

Calcium oxide

CAS-No.: 1305-78-8

Source: MAK (CH) or WEL (UK) GESTIS International Limit Values

Occupational exposure limit value: 2 mg/m³ E or 2 mg/m³

Limitation of exposure peaks: 2 mg/m³ E or 2 mg/m³

Remark:

EC exposure limit values

E: respirable dust fraction

MAK (CH) or WEL (UK): International Limit Values

Control-Banding

none

8.2 Exposure controls

Occupational exposure controls

none

Chemical handling

Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and at the end of work.

Apply skin care products after work. Wash contaminated clothing prior to re-use.

Personal protection equipment

none

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. Respiratory protection required in case of: Dust formation. Suitable respiratory protective equipment: particulates filter device (DIN EN 143).

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 374 Suitable material: NBR (Nitrile rubber).

Eye protection

Tightly sealed safety glasses.

Skin protection

Suitable protection of the body: Overall. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Only wear fitting, comfortable and clean protective clothing.

Environmental exposure controls

refer to chapter 7. No further action is necessary.

Consumer exposure controls
refer to chapter 7. No further action is necessary.

9. Physical and chemical properties

9.1 Information on the basic physical and chemical properties

Appearance

State of matter: solid
Colour: dark grey
Odour: characteristic like: Garlic
Odour threshold: Phosphine. 2 ppm

Safety relevant basis data

	Parameter	Value	Unit	Remark
Density:	at 20 °C:	2,22	g/cm ³	Measured value
Package density:		800 - 900	kg/m ³	literature value (IUCILID)
pH:				alkaline
Melting point / range:		2160	°C	Measured value
Boiling temperature / range:		2300	°C	Measured value
Flash point:				not applicable
Flammability:				Contact with water liberates highly flammable gas.
Lower flammability limit:				not applicable
Upper flammability limit:				not applicable
Explosion hazard:				dust explosive Contact with water liberates highly flammable gas.
Lower explosion limit:		1,5	Vol-%	Ethine (acetylene)
Upper explosion limit:		95,4	Vol-%	Ethine (acetylene)
Ignition temperature:				No data available
Decomposition temperature:				No data available
Oxidizing characteristics:				No data available
Vapour pressure:				not applicable
Relative vapour density:				not applicable
Speed of vaporization/evaporation rate:				not applicable
Solubility in water:				hydrolyzed
Fat solubility:				No data available
Solubility in : log P O/W (n-octanol / water):				No data available
Viscosity:				not applicable
Solvent separation test:				not applicable
Solvent content:				not applicable

9.2 Other information

Contact with water liberates highly flammable gas.

10. Stability and reactivity

10.1 Reactivity

Contact with water liberates highly flammable gas. Exothermic reactions with: Oxidizing agents.

10.2 Chemical stability

In case of warming: Ignition hazard.

10.3 Possible reactions

Decomposition under formation of: Ethine (acetylene). Phosphine. Calcium

10.4 Conditions to avoid

moisture. heat.

10.5 Materials to avoid

Water. acid. alkali Oxidizing agents. metal.

10.6 Hazardous decomposition products

Phosphine.

10.7 Additional information

Calcium hydroxide as well as Calcium oxide react with water into carbon dioxide and calcium carbonate, a natural product.

11. Toxicological information

11.1 Information on toxicological effects

No information available.

Acute toxicity

Specific symptoms in laboratory animals

No information available.

11.2 Irritation and etching

Irritant effect on the skin

irritant.

Irritant effect on the eye

strong irritant. Risk of serious damage to eyes.

Irritant effect on the respiratory tract

irritant.

Etching

corrosive.

11.3 Sensitization

No information available.

11.4 Repeated dose toxicity

No information available.

11.5 CMR effects

Carcinogenicity

none

Mutagenicity

none

Reproductive toxicity

none

11.6 General remarks

none

Practical experience

none

Other observations

none

Additional information

none

12. Ecological information

12.1 Information on ecological effects

No information available.

Ecotoxicity

12.2 Persistence and Biodegradation

No information available.

12.3 Bio accumulative potential

No indication of bio-accumulation potential.

12.4 Mobility

No information available.

12.5 Results of PBT and vPvB assessments

This substance does not meet the criteria for classification as PBT or vPvB.

12.6 Other harmful effects

none

12.7 Further ecological information

Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

12.8 Further details

none

13. Disposal considerations

13.1 Appropriate disposal

Appropriate disposal/Product

Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions.

Appropriate disposal/ packaging

Cleaned containers may be recycled. Handle contaminated packaging in the same way as the substance itself.

Control report for waste code/ waste marking according to EAKV

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a

specific way for every industry and process.

Waste key product: 16 05 06 - Laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals

Waste key packaging: 16 05 06 - Laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals

Remark

Waste disposal according to official state regulations.

14. Transport information

14.1 Overland transport (ADR/RID)

Proper Shipping name

CALCIUMCARBID

CALCIUMCARBID-AMPULLE

UN No.: 1402

Label: 4.3

Packing Group: II

Classification code: 423

Remark: Limited quantity (LQ): LQ11

Transport category: 2

Tunnel restriction code: D/E

14.2 Transport by sea (IMDG)

Proper Shipping name

CALCIUM CARBIDE

CALCIUM CARBID-AMPOULE

UN-No.: 1402

Label: 4.3

Packing Group: II

EmS-No: F-G, S-N

MFAG: 705

Marine pollutant: No

Special Provisions: Materials to avoid: Water, acid, alkali Oxidizing agents metal. Keep away from food, drink and animal feedingstuffs.

Remark: This product is part of a kit. Information in this section refers to the kit as a whole.

14.3 Air transport (ICAO-TI / IATA-DGR)

Proper Shipping name

CALCIUM CARBIDE

CALCIUM CARBID-AMPOULE

UN/ID-No.: 1402

Label: 4.3

Packing Group: II

Remark: This product is part of a kit. Information in this section refers to the kit as a whole.

14.4 Mail

This product is part of a kit. Information in this section refers to the kit as a whole.

15. Regulatory information

15.1 Labelling

Hazardous component(s) for labelling

Calcium carbide; Calcium oxide

Special labelling of particular preparations

Only for professional user. Safety data sheet available for professional user on request.

15.2 Regulations for the safety, health and environmental protection as well as

specific Legislation for the substance/preparation

EU-Regulations

Directive 1999/13/EC on the limitation of emissions of volatile organic compounds (VOC-RL)
none

Regulation (EC) No 2037/2000 on substances that deplete the ozone layer
none

Regulation (EC) No 850/2004 on persistent organic pollutants
none

Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals
none

Regulation (EC) No 648/2004 (Detergents regulation)
none

Restrictions under Title VIII of Regulation (EC) No 1907/2006
none

National regulations

Moreover, national legislation has to be observed!

Informations on working limitations

Youths are only allowed to handle this product according to the regulation 94/33/EC, and as long as all effects of dangerous substances are prevented.

Major Accidents Ordinance
none

Storage class according to VCI
4.3 Substances that form flammable gases in contact with water.

Water Hazard Class according to VwVwS
1 weak water pollutant (WGK 1)

Technical Instructions on Air Quality Control (TA-Luft)
none

Further regulations, limitations and legal requirements
none

15.3 Chemical safety assessment

For this preparation a chemical safety assessment has been carried out: None
For this substance a chemical safety assessment has not been carried out.

16. Other information

16.1 Wording of the H and R-phrases under paragraph 3

Regulation (EC) No 1272/2008

280 Causes severe skin burns and eye damage

314 Causes skin irritation

Directive 67/548/EEC

15 Contact with water liberates highly flammable gas.

34 Causes burns

16.2 Training instructions

Make sure that employees are aware of the intoxication risk. People wearing breathing apparatus must be appropriately trained.

16.3 Recommended restrictions of use

Reserved for industrial and professional use. The product should only be handled by persons over the age of 18, who were informed sufficiently about the dangerous nature of the product and about the necessary safety precautions.

16.4 Further remarks

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.

16.5 Documentation of changes

none

16.6 Data sources

Data arise from reference works and literature.

16.7 Key and definition

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail).

IMDG: International Maritime Code of Dangerous Goods.

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the «International Air Transport Association» (IATA).

ICAO: International Civil Aviation Organisation.

ICAO-TI: Technical Instructions by the «International Civil Aviation Organisation» (ICAO).

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances; Germany).

17. Appendix

17.1 Exposure scenario

-

