

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: **6666**
Version: **1.0 en**

date of compilation: 2017-03-14

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

1.1 Product identifier

Identification of the substance	Calcium carbide
Article number	6666
Registration number (REACH)	01-2119494719-18-xxxx
Index No	006-004-00-9
EC number	200-848-3
CAS number	75-20-7

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

Website: www.carlroth.de

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

e-mail (competent person) : 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. 1)	H260
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.3	serious eye damage/eye irritation	(Eye Dam. 1)	H318

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

2.2 Label elements

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

Signal word

Danger

Pictograms



Hazard statements

H260 In contact with water releases flammable gases which may ignite spontaneously
H315 Causes skin irritation
H318 Causes serious eye damage

Precautionary statements

Precautionary statements - prevention

P231+P232 Handle under inert gas. Protect from moisture.
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.
P310 Immediately call a POISON CENTER/doctor.
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish - never use water.

Precautionary statements - storage

P402+P404 Store in a dry place. Store in a closed container.

Hazardous ingredients for labelling: Calcium oxide

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H318 Causes serious eye damage.
P280 Wear protective gloves/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
contains: Calcium oxide

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



Calcium carbide techn., 1-3 mm

article number: 6666

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Composition/information on ingredients.

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
calcium carbide	CAS No 75-20-7 EC No 200-848-3 Index No 006-004-00-9 REACH Reg. No 01-2119494719-18- XXXX	≥ 80	Water-react. 1 / H260	
Calcium oxide	CAS No 1305-78-8 EC No 215-138-9 REACH Reg. No 01-2119475325-36- xxxx	10 - < 20	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335	 

Remarks

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

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

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

Following ingestion

Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Risk of blindness, Nausea, Risk of serious damage to eyes, Irritation, Vomiting

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
dry extinguishing powder, carbon dioxide (CO₂), dry sand

Unsuitable extinguishing media

water, foam

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO₂), May produce toxic fumes of carbon monoxide if burning. Acetylen

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. Ventilate affected area.

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

6.4 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

Provide adequate ventilation.

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. Keep only in the original container. Keep under inert gas.

Incompatible substances or mixtures

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

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 ³]	STEL [mg/m ³]	Source
GB	calcium oxide	1305-78-8		WEL	2		EH40/2005

Notation

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

Relevant DNELs/DMELs/PNECs and other threshold levels

• relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Calcium oxide	1305-78-8	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Calcium oxide	1305-78-8	DNEL	4 mg/m ³	human, inhalatory	worker (industry)	acute - local effects

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

• relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment	Exposure time
Calcium oxide	1305-78-8	PNEC	0,37 mg/l	freshwater	short-term (single instance)
Calcium oxide	1305-78-8	PNEC	0,24 mg/l	marine water	short-term (single instance)
Calcium oxide	1305-78-8	PNEC	2,27 mg/l	sewage treatment plant (STP)	short-term (single instance)
Calcium oxide	1305-78-8	PNEC	817,4 mg/kg	soil	short-term (single instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)



Eye/face protection

Use safety goggle 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

0,4 mm

• 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). P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid
Colour	dark grey
Odour	like: garlic
Odour threshold	No data available

Other physical and chemical parameters

pH (value)	This information is not available.
Melting point/freezing point	2.160 °C
Initial boiling point and boiling range	This information is not available.
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	Non-flammable
<u>Explosive limits</u>	
• lower explosion limit (LEL)	1,5 vol%
• upper explosion limit (UEL)	95,4 vol%
Explosion limits of dust clouds	these information are not available
Vapour pressure	0 hPa at 20 °C
Density	2,22 g/cm ³ 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	1.600 mg/l at 20 °C , Hydrolysis
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	0,37 (ECHA)
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

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

9.2 Other information

There is no additional information.

Particle size

1 - 3 mm

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

Material reacts vigorously with water emitting flammable gases. _
Violent reaction with: Bases, Methanol, Oxidisers, Acids

10.4 Conditions to avoid

Keep away from heat. Protect from moisture.

10.5 Incompatible materials

copper, silver

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

Exposure route	Endpoint	Value	Species	Source
oral	LD50	>2.000 mg/kg	rat	ECHA
dermal	LD50	>2.500 mg/kg	rabbit	ECHA

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

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

• Specific target organ toxicity - single exposure

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

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

• 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

vomiting, nausea

• If in eyes

Causes serious eye damage, risk of blindness

• 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.

Aquatic toxicity (acute)

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Calcium oxide	1305-78-8	LC50	158 mg/l	aquatic invertebrates	96 h
Calcium oxide	1305-78-8	ErC50	184,6 mg/l	algae	72 h

Aquatic toxicity (chronic)

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Calcium oxide	1305-78-8	LC50	53,1 mg/l	aquatic invertebrates	14 d
Calcium oxide	1305-78-8	EC50	300,4 mg/l	microorganisms	3 h

12.2 Process of degradability

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

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: **6666**

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) 0,37

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.

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/packagings

It is a dangerous waste; only packagings 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	1402
14.2	UN proper shipping name	CALCIUM CARBIDE
	Hazardous ingredients	Calcium carbide
14.3	Transport hazard class(es)	
	Class	4.3 (substances which, in contact with water, emit flammable gases)
14.4	Packing group	I (substance presenting high 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.	

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: **6666**

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	1402
Proper shipping name	CALCIUM CARBIDE
Particulars in the transport document	UN1402, CALCIUM CARBIDE, 4.3, I, (B/E)
Class	4.3
Classification code	W2
Packing group	I
Danger label(s)	4.3



Excepted quantities (EQ)	E0
Limited quantities (LQ)	0
Transport category (TC)	1
Tunnel restriction code (TRC)	B/E
Hazard identification No	X423
Emergency Action Code	4W

• International Maritime Dangerous Goods Code (IMDG)

UN number	1402
Proper shipping name	CALCIUM CARBIDE
Particulars in the shipper's declaration	UN1402, CALCIUM CARBIDE, 4.3, I
Class	4.3
Packing group	I
Danger label(s)	4.3



Special provisions (SP)	951
Excepted quantities (EQ)	E0
Limited quantities (LQ)	0
EmS	F-G, S-N
Stowage category	B

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

• International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	1402
Proper shipping name	Calcium carbide
Particulars in the shipper's declaration	UN1402, Calcium carbide, 4.3, I
Class	4.3
Packing group	I
Danger label(s)	4.3



Excepted quantities (EQ) E0

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)

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

• Restrictions according to REACH, Annex XVII

None of the ingredients are listed.

Name of substance	CAS No	Wt%	Type of registration	No
Calcium carbide		100	1907/2006/EC annex XVII	40

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

None of the ingredients are listed.

• Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
O2	other hazards (Water-react., cat. 1)	100 500	59)

Notation

59) Substances and mixtures which in contact with water emit flammable gases, category 1

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: 6666

• Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)

VOC content 0 %

• Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content 0 %

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

National inventories

- EINECS/ELINCS/NLP (Europe)
- DSL/NDSL (Canada)
- Toxic Substance Control Act (TSCA)

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

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)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
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



Calcium carbide techn., 1-3 mm

article number: **6666**

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
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
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)
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
STEL	short-term exposure limit
STOT SE	specific target organ toxicity - single exposure
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative
Water-react.	material which, in contact with water, emits flammable gases
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)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

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

Code	Text
H260	in contact with water releases flammable gases which may ignite spontaneously
H315	causes skin irritation
H318	causes serious eye damage
H335	may cause respiratory irritation

Safety data sheet

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



Calcium carbide techn., 1-3 mm

article number: **6666**

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.