

Safety data sheet

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



Calcium ≥99,5 %, granulated

article number: **2729**
Version: **1.0 en**

date of compilation: 2017-03-21

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

1.1 Product identifier

| | |
|---------------------------------|------------------------------------|
| Identification of the substance | Calcium |
| Article number | 2729 |
| Registration number (REACH) | This information is not available. |
| Index No | 020-001-00-X |
| EC number | 231-179-5 |
| CAS number | 7440-70-2 |

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. 2) | H261 |

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

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

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/eye protection.

Precautionary statements - storage

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

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|-------------------|--------------|
| Name of substance | Calcium |
| Index No | 020-001-00-X |
| EC number | 231-179-5 |
| CAS number | 7440-70-2 |
| Molecular formula | Ca |
| Molar mass | 40,08 g/mol |

Safety data sheet

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



Calcium $\geq 99,5$ %, granulated

article number: 2729

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 all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water, holding the eyelids apart. Consult an ophthalmologist.

Following ingestion

Rinse mouth. Do not induce vomiting. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Corneal opacity

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, dry sand, cement, use metal fire powder to extinguish - never use water

Unsuitable extinguishing media

water, foam, carbon dioxide (CO₂)

5.2 Special hazards arising from the substance or mixture

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

5.3 Advice for firefighters

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

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

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.

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

Avoid dust formation. 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

Keep container tightly closed.

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.

7.3 Specific end use(s)

No information available.

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Data are not available.

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

- **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 (granulate) |
| Colour | metallic |
| Odour | odourless |
| Odour threshold | No data available |

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

Other physical and chemical parameters

| | |
|---|---|
| pH (value) | 14 (4 g/l, 20 °C) |
| Melting point/freezing point | 839 °C |
| Initial boiling point and boiling range | 1.484 °C |
| Flash point | not applicable |
| Evaporation rate | no data available |
| Flammability (solid, gas) | Substance which, in contact with water, emits flammable gases (in accordance with GHS criteria) |

Explosive limits

| | |
|---------------------------------|-------------------------------------|
| • 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 | 0 hPa at 20 °C |
| Density | 1,55 g/cm ³ at 20 °C |
| Vapour density | This information is not available. |
| Bulk density | 700 kg/m ³ |
| Relative density | Information on this property is not available. |

Solubility(ies)

| | |
|------------------|----------------|
| Water solubility | 4 g/l at 20 °C |
|------------------|----------------|

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.

Safety data sheet

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



Calcium $\geq 99,5$ %, granulated

article number: 2729

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

Exothermic reaction with: Alkali metals, Ammonia (NH₃), Mercury, _

Risk of ignition: Acids, Oxygen, Water,

Danger of explosion: Alkali hydroxide (caustic alkali), Phosphorus oxides (e.g. P₂O₅), Sulphur, Strong oxidiser

10.4 Conditions to avoid

Protect from moisture.

10.5 Incompatible materials

There is no additional information.

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.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

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).

• 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

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

- **If in eyes**

Irritating to eyes

- **If inhaled**

data are not available

- **If on skin**

data are not available

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)

| Endpoint | Value | Species | Exposure time |
|----------|----------|---------------|---------------|
| LC50 | 330 mg/l | daphnia magna | 48 h |

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.

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.

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

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 | 1401 |
| 14.2 | UN proper shipping name | CALCIUM |
| | Hazardous ingredients | Calcium |
| 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 | 1401 |
| | Proper shipping name | CALCIUM |
| | Particulars in the transport document | UN1401, CALCIUM, 4.3, II, (D/E) |
| | Class | 4.3 |
| | Classification code | W2 |
| | Packing group | II |
| | Danger label(s) | 4.3 |
| |  | |
| | Excepted quantities (EQ) | E2 |
| | Limited quantities (LQ) | 500 g |
| | Transport category (TC) | 2 |
| | Tunnel restriction code (TRC) | D/E |
| | Hazard identification No | 423 |
| | Emergency Action Code | 4W |

Safety data sheet

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



Calcium $\geq 99,5\%$, granulated

article number: 2729

• International Maritime Dangerous Goods Code (IMDG)

| | |
|--|--------------------------|
| UN number | 1401 |
| Proper shipping name | CALCIUM |
| Particulars in the shipper's declaration | UN1401, CALCIUM, 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-O |
| Stowage category | E |

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

| | |
|--|--------------------------|
| UN number | 1401 |
| Proper shipping name | Calcium |
| Particulars in the shipper's declaration | UN1401, Calcium, 4.3, II |
| Class | 4.3 |
| Packing group | II |
| Danger label(s) | 4.3 |



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

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.

Safety data sheet

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



Calcium $\geq 99,5$ %, granulated

article number: 2729

- **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.

- **Restrictions according to REACH, Annex XVII**

| Name of substance | CAS No | Wt% | Type of registration | No |
|-------------------|--------|-----|-------------------------|----|
| Calcium | | 100 | 1907/2006/EC annex XVII | 3 |
| Calcium | | 100 | 1907/2006/EC annex XVII | 40 |

- **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)
- DSL/NDSL (Canada)
- REACH (Europe)
- Toxic Substance Control Act (TSCA)

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) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |

Safety data sheet

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



Calcium $\geq 99,5$ %, granulated

article number: 2729

| Abbr. | Descriptions of used abbreviations |
|----------|---|
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| 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 |
| 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) |
| vPvB | very Persistent and very Bioaccumulative |

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 |
|------|--|
| H261 | in contact with water releases flammable gases |

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.