

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: **5079**  
Version: **GHS 4.0 en**  
Replaces version of: 2021-10-22  
Version: (GHS 3)

date of compilation: 2016-02-24  
Revision: 2024-03-02

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

### 1.1 Product identifier

Identification of the substance **Lithium chloride ROTI®METIC 99,999 % (5N)**  
Article number 5079  
CAS number 7447-41-8

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

Relevant identified uses: Laboratory chemical  
Laboratory and analytical use  
Uses advised against: Do not use for private purposes (household).  
Food, drink and animal feedingstuffs.

### 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

| Name   | Street          | Postal code/city   | Telephone | Website |
|--|-----------------|--------------------|-----------|---------|
| NSW Poisons Information Centre<br>Childrens Hospital | Hawkesbury Road | 2145 Westmead, NSW | 131126    |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class                      | Cat-egory | Hazard class and category | Hazard statement |
|---------|-----------------------------------|-----------|---------------------------|------------------|
| 3.10    | Acute toxicity (oral)             | 4         | Acute Tox. 4              | H302             |
| 3.2     | Skin corrosion/irritation         | 2         | Skin Irrit. 2             | H315             |
| 3.3     | Serious eye damage/eye irritation | 2A        | Eye Irrit. 2A             | H319             |

For full text of abbreviations: see SECTION 16

### 2.2 Label elements

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

### Labelling

#### Signal word

Warning

#### Pictograms

GHS07



#### Hazard statements

|      |                               |
|------|-------------------------------|
| H302 | Harmful if swallowed          |
| H315 | Causes skin irritation        |
| H319 | Causes serious eye irritation |

#### Precautionary statements

##### Precautionary statements - prevention

P280 Wear protective gloves

##### Precautionary statements - response

|                |   |
|----------------|---|
| P302+P352      | IF ON SKIN: Wash with plenty of soap and water  |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| P321           | Specific treatment (see on this label)  |
| P337+P313      | If eye irritation persists: Get medical advice/attention  |

##### Precautionary statements - disposal

P501 Dispose of contents/container to industrial combustion plant

## 2.3 Other hazards

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |                  |
|-------------------|------------------|
| Name of substance | Lithium chloride |
| Molecular formula | CLi              |
| Molar mass        | 42.39 g/mol      |
| CAS No            | 7447-41-8        |

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

## 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

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 with water (only if the person is conscious). Call a doctor.

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

Vomiting, Irritation

### 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 firefighting measures to the fire surroundings!  
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

water jet

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

Non-combustible.

#### Hazardous combustion products

In case of fire may be liberated: Hydrogen chloride (HCl)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe dust.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

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

Take up mechanically. Control of dust.

#### 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.

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

Removal of dust deposits.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Store in a dry place. Keep container tightly closed. Hygroscopic solid.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Protect against external exposure, such as

humidity

#### Consideration of other advice:

#### Ventilation requirements

Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

### 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 | Identifier | TWA [mg/m <sup>3</sup> ] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source |
|---------|----------------|--------|------------|--------------------------|---------------------------|--------------------------------|----------|--------|
| AU      | nuisance dusts |        | WES        | 10                       |                           |                                | i        | WES    |

#### Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

i Inhalable 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 (unless otherwise specified)

#### Human health values

| Relevant DNELs and other threshold levels |                      |                                    |                   |                            |
|---|----------------------|------------------------------------|-------------------|----------------------------|
| Endpoint                                  | Threshold level      | Protection goal, route of exposure | Used in           | Exposure time              |
| DNEL                                      | 10 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| DNEL                                      | 30 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | acute - systemic effects   |
| DNEL                                      | 73.2 mg/kg bw/day    | human, dermal                      | worker (industry) | chronic - systemic effects |
| DNEL                                      | 100 mg/kg bw/day     | human, dermal                      | worker (industry) | acute - systemic effects   |

#### Environmental values

| Relevant PNECs and other threshold levels |                 |                       |                              |                              |
|---|-----------------|-----------------------|------------------------------|------------------------------|
| Endpoint                                  | Threshold level | Organism              | Environmental compartment    | Exposure time                |
| PNEC                                      | 10.4 mg/l       | aquatic organisms     | freshwater                   | short-term (single instance) |
| PNEC                                      | 1.04 mg/l       | aquatic organisms     | marine water                 | short-term (single instance) |
| PNEC                                      | 140.2 mg/l      | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| PNEC                                      | 270 mg/kg       | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| PNEC                                      | 27 mg/kg        | aquatic organisms     | marine sediment              | short-term (single instance) |
| PNEC                                      | 49.95 mg/kg     | terrestrial organisms | soil                         | short-term (single instance) |

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

### 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. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

##### • 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). 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 Safety data sheet

acc. to Safe Work Australia - Code of Practice



Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |  |
|--|--|
| Physical state   | solid  |
| Form   | powder, crystalline                            |
| Colour   | white  |
| Odour  | odourless                                      |
| Melting point/freezing point                             | 608.5 °C at 1,013 hPa (ECHA)                   |
| Boiling point or initial boiling point and boiling range | 1,360 °C at 1,013 hPa                          |
| Flammability   | non-combustible                                |
| Lower and upper explosion limit                          | not determined                                 |
| Flash point  | not applicable                                 |
| Auto-ignition temperature                                | not determined                                 |
| Decomposition temperature                                | not relevant                                   |
| pH (value)   | 7 – 8 (in aqueous solution: 50 g/l, 20 °C)     |
| Kinematic viscosity                                      | not relevant                                   |
| <u>Solubility(ies)</u>                                   |  |
| Water solubility   | 569 g/l at 20 °C (ECHA)                        |
| <u>Partition coefficient</u>                             |  |
| Partition coefficient n-octanol/water (log value):       | not relevant (inorganic)                       |
| Vapour pressure  | not determined                                 |
| <u>Density and/or relative density</u>                   |  |
| Density  | 2.07 g/cm <sup>3</sup> at 20 °C                |
| Relative vapour density                                  | Information on this property is not available. |
| Bulk density   | 500 – 1,000 kg/m <sup>3</sup>                  |
| Particle characteristics                                 | No data available.                             |
| <u>Other safety parameters</u>                           |  |
| Oxidising properties                                     | none   |

### 9.2 Other information

|   |   |
|---|---|
| Information with regard to physical hazard classes: | hazard classes acc. to GHS (physical hazards): not relevant |
| Other safety characteristics:                       | There is no additional information.                         |

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

Moisture-sensitive. Hygroscopic solid.

### 10.3 Possibility of hazardous reactions

**Violent reaction with:** Alkali metals

### 10.4 Conditions to avoid

Humidity.

### 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

**Classification acc. to GHS**

#### Acute toxicity

Harmful if swallowed.

| Acute toxicity |          |           |         |        |        |
|----------------|----------|-----------|---------|--------|--------|
| Exposure route | Endpoint | Value     | Species | Method | Source |
| oral           | LD50     | 526 mg/kg | rat     |        | ECHA   |

#### 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.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### Reproductive toxicity

Shall not be classified 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



# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

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, gastrointestinal complaints

#### • If in eyes

Causes serious eye irritation

#### • If inhaled

Inhalation of dust may cause irritation of the respiratory system

#### • If on skin

causes skin irritation

#### • Other information

none

### 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (acute) |           |                       |        |               |
|--------------------------|-----------|-----------------------|--------|---------------|
| Endpoint                 | Value     | Species               | Source | Exposure time |
| LC50                     | 158 mg/l  | fish                  | ECHA   | 96 h          |
| EC50                     | 249 mg/l  | aquatic invertebrates | ECHA   | 48 h          |
| ErC50                    | >400 mg/l | algae                 | ECHA   | 72 h          |

| Aquatic toxicity (chronic) |           |                       |        |               |
|----------------------------|-----------|-----------------------|--------|---------------|
| Endpoint                   | Value     | Species               | Source | Exposure time |
| EC50                       | >1.7 mg/l | aquatic invertebrates | ECHA   | 21 d          |

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

### 12.7 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

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

### 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. Non-contaminated packages may be recycled.

## SECTION 14: Transport information

- |      |  |   |
|------|--|---|
| 14.1 | <b>UN number</b>   | not subject to transport regulations  |
| 14.2 | <b>UN proper shipping name</b>   | not assigned  |
| 14.3 | <b>Transport hazard class(es)</b>  | not assigned  |
| 14.4 | <b>Packing group</b>   | not assigned  |
| 14.5 | <b>Environmental hazards</b>   | non-environmentally hazardous acc. to the dangerous goods regulations   |
| 14.6 | <b>Special precautions for user</b>  | There is no additional information.   |
| 14.7 | <b>Transport in bulk according to IMO instruments</b>                              | The cargo is not intended to be carried in bulk.  |
| 14.8 | <b><u>Information for each of the UN Model Regulations</u></b>                     |   |
|      | <b>Transport information</b>   | <b>National regulations</b> Additional information (UN RTDG)<br>Not subject to transport regulations. UN RTDG |
|      | <b>International Maritime Dangerous Goods Code (IMDG) - Additional information</b> | Not subject to IMDG.  |

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

## SECTION 15: Regulatory information

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

There is no additional information.

#### National regulations(Australia)

##### Australian Inventory of Chemical Substances(AICS)

Substance is listed.

#### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### National inventories

| Country | Inventory  | Status                       |
|---------|------------|------------------------------|
| AU      | AIIC       | substance is listed          |
| CA      | DSL        | substance is listed          |
| CN      | IECSC      | substance is listed          |
| EU      | ECSI       | substance is listed          |
| EU      | REACH Reg. | substance is listed          |
| JP      | CSCL-ENCS  | substance is listed          |
| KR      | KECI       | substance is listed          |
| MX      | INSQ       | substance is listed          |
| NZ      | NZIoC      | substance is listed          |
| PH      | PICCS      | substance is listed          |
| TR      | CICR       | substance is listed          |
| TW      | TCSI       | substance is listed          |
| US      | TSCA       | substance is listed (ACTIVE) |
| VN      | NCI        | substance is listed          |

#### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NCI        | National Chemical Inventory   |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

### 15.2 Chemical Safety Assessment

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

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value)   | Safety-relevant |
|---------|---------------------------|---|-----------------|
| 2.3     |                           | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ . | yes             |
| 15.1    |                           | National inventories:<br>change in the listing (table)  | yes             |

### Abbreviations and acronyms

| Abbr.     | Descriptions of used abbreviations   |
|-----------|--|
| CAS       | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)   |
| Ceiling-C | Ceiling value  |
| DGR       | Dangerous Goods Regulations (see IATA/DGR)   |
| DNEL      | Derived No-Effect Level  |
| EC50      | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| ED        | Endocrine disruptor  |
| EINECS    | European Inventory of Existing Commercial Chemical Substances  |
| ELINCS    | European List of Notified Chemical Substances  |
| ErC50     | $\equiv$ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control    |
| 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  |
| LC50      | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                                |
| LD50      | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval   |
| NLP       | No-Longer Polymer  |
| PBT       | Persistent, Bioaccumulative and Toxic  |
| PNEC      | Predicted No-Effect Concentration  |
| STEL      | Short-term exposure limit  |
| TWA       | Time-weighted average  |
| UN RTDG   | UN Recommendations on the Transport of Dangerous Good  |
| vPvB      | Very Persistent and very Bioaccumulative   |
| WES       | Safe Work Australia: Workplace exposure standards for airborne contaminants  |

# Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



## Lithium chloride ROTI®METIC 99,999 % (5N)

article number: 5079

### Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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

| Code | Text                           |
|------|--------------------------------|
| H302 | Harmful if swallowed.          |
| H315 | Causes skin irritation.        |
| H319 | Causes serious eye irritation. |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.