

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

Lithiumchloridlösung

Article No.:

0554 0635

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

Relevant identified uses:

Product Categories [PC]

PC 21: Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Testo AG

Telephone:

E-mail:

Website:

E-mail (competent person):

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	Calculation method.
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	Calculation method.
Acute toxicity (oral) (<i>Acute Tox. 4</i>)	H302: Harmful if swallowed.	Calculation method.

2.2. Label elements

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

Hazard pictograms:



GHS07

Exclamation mark.

Signal word: Warning

Hazard components for labelling:

lithium chloride

hazard statements for health hazards	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Supplemental Hazard information (EU): -

Precautionary statements Prevention

P280.2 Wear protective gloves and eye/face protection.

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Precautionary statements Response

P301 + P312.1	IF SWALLOWED: Call a POISON CENTER if you feel unwell.
P302 + P352.1	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.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

2.3. Other hazards**Adverse physicochemical effects:**

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Other adverse effects:

No information available.

SECTION 3: Composition / information on ingredients**3.2. Mixtures****Description:**

saturated aqueous solution

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concen- tration
CAS No.: 7447-41-8 EC No.: 231-212-3	lithium chloride Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2  Warning H302-H315-H319	≥ 45 - ≤ 90 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information:**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Remove victim out of the danger area.

Remove contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice.

Do not leave affected person unattended.

Following inhalation:

Provide fresh air. In case of respiratory tract irritation, consult a physician.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion:

Rinse mouth. Get medical advice/attention if you feel unwell.

Self-protection of the first aider:

Use personal protection equipment.

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

Skin corrosion/irritation Serious eye damage/eye irritation

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

Hazardous combustion products:

No information available.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8).

Fire prevent measures:

No special measures are necessary.

Usual measures for fire prevention.

Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

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Requirements for storage rooms and vessels:

Keep/Store only in original container.

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

storage temperature 5 - 30 °C

Protect from sunlight.

Keep away from heat.

Storage class: 12 - non-combustible liquids that cannot be assigned to any of the above storage classes**7.3. Specific end use(s)**

No data available

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.1.1. Occupational exposure limit values**

No data available

8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
lithium chloride CAS No.: 7447-41-8	73 mg/kg bw/day	① DNEL worker ② DNEL long-term dermal (systemic)
lithium chloride CAS No.: 7447-41-8	0.01 g/m ³	① DNEL worker ② DNEL long-term oral (repeated)
Substance name	PNEC Value	① PNEC type
lithium chloride CAS No.: 7447-41-8	10 mg/l	① PNEC aquatic, freshwater

8.2. Exposure controls**8.2.1. Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

8.2.2. Personal protection equipment**Eye/face protection:**

Eye glasses with side protection DIN EN 166

Skin protection:

Tested protective gloves must be worn DIN EN 374

Suitable material: NBR (Nitrile rubber)

Breakthrough time (maximum wearing time) 480 min

In the case of wanting to use the gloves again, clean them before taking off and air them well.

Breakthrough times and swelling properties of the material must be taken into consideration.

Respiratory protection:

Usually no personal respiratory protection necessary.

8.2.3. Environmental exposure controls

No information available.

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance****Physical state:** liquid**Odour:** odourless**Colour:** colourless**Odour threshold:** not applicable

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Safety relevant basis data

parameter		at °C	method	Remark
pH	6	20 °C		
Melting point/freezing point	not determined			
Freezing point	not determined			
Initial boiling point and boiling range	≈ 100 °C		The statement is derived from the properties of the single components.	
Decomposition temperature (°C):	not determined			
Flash point	not applicable			
Evaporation rate	not determined			
Ignition temperature in °C	not applicable			
Upper/lower flammability or explosive limits	not applicable			
Vapour pressure	23 hPa	20 °C		
Vapour density	not determined			
Density	not determined			
Bulk density	not determined			
Water solubility (g/L)	completely miscible			
Partition coefficient: n-octanol/water	not determined			
Dynamic viscosity	not determined			
Kinematic viscosity	not determined			

9.2. Other information

Water content (%) 88

Solvent content (%) 0

SECTION 10: Stability and reactivity**10.1. Reactivity**

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

CAS No.	Substance name	Toxicological information
7447-41-8	lithium chloride	LD ₅₀ oral: =526 mg/kg (Rat) LC ₅₀ inhalative: >5.57 mg/l (Rat) LD ₅₀ dermal: >2,000 mg/kg (Rat)

Acute oral toxicity:

Harmful if swallowed.

Acute dermal toxicity:

The classification criteria for this hazard class are not met by definition.

Acute inhalation toxicity:

The classification criteria for this hazard class are not met by definition.

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Skin corrosion/irritation:

Causes skin irritation.

Eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitisation:

The classification criteria for this hazard class are not met by definition.

Germ cell mutagenicity:

The classification criteria for this hazard class are not met by definition.

Carcinogenicity:

The classification criteria for this hazard class are not met by definition.

Reproductive toxicity:

The classification criteria for this hazard class are not met by definition.

STOT-single exposure:

The classification criteria for this hazard class are not met by definition.

STOT-repeated exposure:

The classification criteria for this hazard class are not met by definition.

Aspiration hazard:

The classification criteria for this hazard class are not met by definition.

Additional information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Assessment/classification:

The classification criteria for this hazard class are not met by definition.

12.2. Persistence and degradability

Biodegradation:

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

12.3. Bioaccumulative potential

Accumulation / Evaluation:

No indication of bioaccumulation potential.

12.4. Mobility in soil

No adsorption in soil or sediment.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

06 03 99	wastes from the MFSU of salts and their solutions and metallic oxides: Wastes not otherwise specified
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Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

13.2. Additional information

No data available

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SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

No data available

15.2. Chemical Safety Assessment

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

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

See overview table

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

16.6. Training advice

No data available

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16.7. Additional information

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

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.