

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Lithium sulfate monohydrate for analysis, ACS

Revision date: 21.08.2023

Product code: 27140

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

### 1.1. Product identifier

Lithium sulfate monohydrate for analysis, ACS

CAS No: 10102-25-7

EC No: 233-820-4

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

#### Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Uses advised against

Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH

Street: Stempelstraße 6

Place: D-47167 Duisburg

Telephone: 0203/5194-0

Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit

Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de

Responsible Department: Abteilung Produktsicherheit

### 1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Acute Tox. 4; H302

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



#### Hazard statements

H302

Harmful if swallowed.

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**Precautionary statements**

P270 Do not eat, drink or smoke when using this product.  
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P330 Rinse mouth.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Sum formula: Li<sub>2</sub>SO<sub>4</sub> \* H<sub>2</sub>O  
 Molecular weight: 127,96 g/mol

**Hazardous components**

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
10102-25-7	sulfuric acid, dilithium salt, monohydrate	100 %
	233-820-4	
	Acute Tox. 4, Eye Irrit. 2; H302 H319	

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
10102-25-7	233-820-4	sulfuric acid, dilithium salt, monohydrate	100 %
		inhalation: LC50 = > 2 mg/l (dusts or mists); dermal: LD50 = > 3000 mg/kg; oral: LD50 = 613 mg/kg	

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

No data available

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash immediately with: Water  
 Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.  
 Remove contact lenses, if present and easy to do. Continue rinsing.  
 Consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water.  
 Call a physician immediately.

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

Irritant, Dizziness

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Gastrointestinal complaints, Vomiting  
Circulatory collapse, Agitation  
Spasms

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

No data available

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

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

##### **Unsuitable extinguishing media**

no restriction

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

Non-combustible solids  
Hazardous combustion products  
In case of fire may be liberated:  
Sulphur oxides

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Use water spray jet to protect personnel and to cool endangered containers.

### **SECTION 6: Accidental release measures**

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

##### **For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

##### **For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

#### **6.2. Environmental precautions**

No special environmental measures are necessary.

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

##### **For containment**

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Take up carefully when dry. Take up dust-free and set down dust-free.

##### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

##### **Other information**

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### **6.4. Reference to other sections**

Safe handling: see section 7

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Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

- Handle and open container with care.
- Provide adequate ventilation.
- Avoid contact with skin, eyes and clothes.
- Avoid dust formation. Do not breathe dust.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

- Take off contaminated clothing.
- Wash hands before breaks and after work.
- When using do not eat or drink.

**Further information on handling**

- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and after work.
- Draw up and observe skin protection programme.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed and dry.

**Further information on storage conditions**

storage temperature: +15°C - +25°C.

**7.3. Specific end use(s)**

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
10102-25-7	sulfuric acid, dilithium salt, monohydrate			
Worker DNEL, long-term		inhalation	systemic	10 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	95 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	10 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	95 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	9,5 mg/kg bw/day

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
10102-25-7	sulfuric acid, dilithium salt, monohydrate	
Freshwater		13,5 mg/l
Freshwater (intermittent releases)		13,5 mg/l
Marine water		1,35 mg/l
Freshwater sediment		350,1 mg/kg
Marine sediment		35,01 mg/kg
Micro-organisms in sewage treatment plants (STP)		182 mg/l
Soil		64,77 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

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

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear eye/face protection.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11 mm  
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11 mm  
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
Filtering device with filter or ventilator filtering device of type: P2

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**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	white
Odour:	odourless
Odour threshold:	not determined
Melting point/freezing point:	120 °C
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	not determined not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	not applicable
Decomposition temperature:	not determined
pH-Value (at 20 °C):	4,5 - 6,0 (50 g/l)
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	340 g/L
Solubility in other solvents	not determined
Dissolution rate:	not determined
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	not determined
Vapour pressure:	not determined
Vapour pressure:	not determined
Density:	2,05 g/cm <sup>3</sup>
Relative density:	not determined
Bulk density:	~940 kg/m <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	not determined

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties	not determined
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	not determined
Gas:	not applicable
Oxidizing properties	not determined

**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	not determined
Solid content:	100%
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined

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not determined:

Viscosity / dynamic:

not determined

Flow time:

not determined

**Further Information**

not determined

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
10102-25-7	sulfuric acid, dilithium salt, monohydrate				
	oral	LD50 613 mg/kg	Rat	Environ. I Health Persp. 106, Suppl. 2,	Only handbook or published data available!
	dermal	LD50 > 3000 mg/kg	Rabbit	Study report (1976)	OECD Guideline 402
	inhalation (4 h) dust/mist	LC50 > 2 mg/l	Rat	Study report (1988)	OECD Guideline 403

**Irritation and corrosivity**

Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

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**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

No data available

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No data available

**Other information**

No data available

**Further information**

Irritant, Dizziness

Gastrointestinal complaints, Vomiting

Circulatory collapse, Agitation

Spasms

**SECTION 12: Ecological information**

**12.1. Toxicity**

No data available

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
10102-25-7	sulfuric acid, dilithium salt, monohydrate					
	Acute fish toxicity	LC50 mg/l	30,3	96 h	Oncorhynchus mykiss	REACH Registration Dossier OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	> 400	72 h	Desmodesmus subspicatus	REACH Registration Dossier OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	33,2	48 h	Daphnia magna	REACH Registration Dossier OECD Guideline 202
	Fish toxicity	NOEC mg/l	17,35	34 d	Danio rerio	REACH Registration Dossier OECD Guideline 210
	Crustacea toxicity	NOEC	1,7 mg/l	21 d	Daphnia magna	REACH Registration Dossier OECD Guideline 211
	Acute bacteria toxicity	(EC50 mg/l)	180,8	3 h	activated sludge, domestic	REACH Registration Dossier EU Method C.11

**12.2. Persistence and degradability**



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

#### **12.3. Bioaccumulative potential**

No data available

#### **BCF**

CAS No	Chemical name	BCF	Species	Source
10102-25-7	sulfuric acid, dilithium salt, monohydrate	11,42	Maize	REACH Registration D

#### **12.4. Mobility in soil**

No data available

#### **12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

#### **12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### **12.7. Other adverse effects**

Do not empty into drains.

#### **Further information**

Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

##### **Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not mix with other wastes.

##### **Contaminated packaging**

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

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### **Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### **Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### **Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

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**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 12.

**Abbreviations and acronyms**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Acute Tox: Acute toxicity

Eye Irrit: Eye irritation

**Relevant H and EUH statements (number and full text)**

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

**Further Information**

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.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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