

## Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

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

#### · 1.1 Product identifier

- **Trade name:** L 5034
- **Article number:** 285138308
- **Description:** Ethanol saturated with lithium chloride
- **Product code:** scho0006

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

- **Product category:** PC21 Laboratory chemicals
- **Process category:** PROC15 Use as laboratory reagent
- **Application of the substance / the preparation:** Electrolyte solution

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

##### · **Manufacturer/Supplier:**

Xylem Analytics Germany GmbH  
Am Achalaich 11  
82362 Weilheim  
Germany

Kontakt: SI Analytics, Mainz  
Tel. +49 6131 894-5111

- **Further information obtainable from:** E-Mail: msds.si@xylem.com

#### · 1.4 Emergency telephone number: Chemtrec: (USA & Canada) 800-424-9300 (International) 001 703-527-3887

### SECTION 2: Hazards identification

#### · 2.1 Classification of the substance or mixture

##### · **Classification according to Regulation (EC) No 1272/2008:**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

#### · 2.2 Label elements:

##### · **Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

##### · **Hazard pictograms:**



GHS02

##### · **Signal word:** Danger

##### · **Hazard statements:**

H225 Highly flammable liquid and vapour.

##### · **Precautionary statements:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P240 Ground and bond container and receiving equipment.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

(Contd. on page 2)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 1)

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Environmental information: The substance/mixture does not contain components with endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.



Toxicological information: The substance/mixture does not contain components with endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

#### · Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol	 Flam. Liq. 2, H225	≥ 90 - < 95%
CAS: 7447-41-8 EINECS: 231-212-3	lithium chloride	 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	≥ 5 - < 10%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### · After inhalation:

Supply fresh air.  
Consult a doctor.

#### · After skin contact:

Remove all contaminated clothing immediately.  
Wash skin with water or shower.  
If skin irritation or rash occurs: Get medical advice/attention.

#### · After eye contact:

Rinse opened eye for several minutes under running water.  
Consult an ophthalmologist.  
Remove contact lenses.

#### · After swallowing:

Rinse out mouth and then drink plenty of water.  
Call a doctor immediately.

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

Dizziness

Vomiting

#### · Hazards

Danger of impaired breathing.  
Danger of pulmonary oedema.

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

No further relevant information available.

EU

(Contd. on page 3)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 2)

## SECTION 5: Firefighting measures

### · 5.1 Extinguishing media

- **Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

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

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

May form explosive mixtures with air at ambient temperatures.

### · 5.3 Advice for firefighters

#### · **Protective equipment:**

Stay in the danger zone only with self-contained breathing apparatus. Avoid skin contact by keeping a safe distance or wearing suitable protective clothing.

#### · **Additional information**

Cool endangered receptacles with water spray.

Do not allow extinguishing water to enter the surface water or groundwater system.

## SECTION 6: Accidental release measures

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

Avoid contact with skin and eyes.

Ensure adequate ventilation

Keep away from ignition sources.

### · 6.2 Environmental precautions:

Do not empty into drain. Risk of explosion!

Do not allow to enter sewers/ surface or ground water.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Send for recovery or disposal in suitable receptacles.

### · 6.4 Reference to other sections See Section 13 for disposal information.

## SECTION 7: Handling and storage

### · 7.1 Precautions for safe handling

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Use solvent-proof equipment.

#### · **Information about fire - and explosion protection:**

Keep away from sources of ignition and hot surfaces.

Protect against electrostatic charges.

Wear shoes with conductive soles.

Fumes can combine with air to form an explosive mixture.

Flammable gas-air mixtures may form in empty receptacles.

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

#### · **Requirements to be met by storerooms and receptacles:**

Recommendation: Store in the original container.

Provide solvent resistant, sealed floor.

#### · **Information about storage in one common storage facility:** Store away from oxidising agents.

#### · **Further information about storage conditions:**

Store receptacle in a well ventilated area.

Keep container tightly sealed.

Recommended storage temperature: 15 - 25 °C

(Contd. on page 4)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 3)

- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### · 8.1 Control parameters

#### · **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists valid during the making were used as basis.

### · 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see section 7.

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

##### · **General protective and hygienic measures:**

- Avoid contact with the eyes and skin.
- Do not inhale gases / fumes / aerosols.
- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and at the end of work.

##### · **Respiratory protection:**

- Only required when fog or aerosols are generated or when the workplace is not sufficiently ventilated.
- Recommended filter type: E

##### · **Hand protection** Protective gloves recommended for frequent or long-term skin contact.

###### · **Material of gloves**

- Fluorocarbon rubber (Viton)
- Recommended thickness of the material:  $\geq 0.4$  mm
- Breakthrough time: 480 min

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

##### · **Eye/face protection** Safety goggles with side protection

##### · **Body protection:** Protective clothing

- **Environmental exposure controls** Do not allow product to reach ground water, water course or sewage system.

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · **General Information**

- **Physical state** Liquid
- **Colour:** Colourless
- **Odour:** Alcohol-like
  - **Odour threshold:** No data available.
- **Melting point/freezing point:** ca. -115 °C
- **Boiling point or initial boiling point and boiling range** 78 °C
- **Flammability** Highly flammable.
- **Lower and upper explosion limit**
  - **Lower:** 3.5 Vol %
  - **Upper:** 15.0 Vol %
- **Flash point:** 13 °C (c.c.)
- **Auto-ignition temperature:** 425 °C
- **pH at 20 °C** 7
- **Viscosity:**
  - **Kinematic viscosity at 20 °C** 1.4 mm<sup>2</sup>/s

(Contd. on page 5)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 4)

<ul style="list-style-type: none"> <li>· <b>Dynamic viscosity:</b></li> <li>· <b>Solubility</b> <ul style="list-style-type: none"> <li>· <b>water:</b></li> </ul> </li> <li>· <b>Partition coefficient n-octanol/water (log value)</b></li> <li>· <b>Vapour pressure at 20 °C:</b></li> <li>· <b>Density and/or relative density</b> <ul style="list-style-type: none"> <li>· <b>Density at 20 °C:</b></li> </ul> </li> </ul>	<p>No data available.</p> <p>Fully miscible.</p> <p>-0.3 log POW (Ethanol)</p> <p>59 hPa</p> <p>0.8 g/cm<sup>3</sup></p>
<ul style="list-style-type: none"> <li>· <b>9.2 Other information</b></li> <li>· <b>Important information on protection of health and environment, and on safety.</b> <ul style="list-style-type: none"> <li>· <b>Ignition temperature:</b></li> <li>· <b>Explosive properties:</b></li> </ul> </li> </ul>	<p>Fumes are heavier than air.</p> <p>Product is not selfigniting.</p> <p>Product is not explosive. However, formation of explosive air/vapour mixtures are possible.</p>
<ul style="list-style-type: none"> <li>· <b>Information with regard to physical hazard classes</b></li> <li>· <b>Flammable liquids</b></li> </ul>	<p>Void</p> <p>Highly flammable liquid and vapour.</p>

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
  - **Thermal decomposition / conditions to be avoided:**  
The product is chemically stable under normal ambient conditions (room temperature).
- **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
No dangerous decomposition products known.  
In case of fire: See section 5.

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
  - **Acute toxicity**  
No quantitative toxicity data are available for this product.  
Based on available data, the classification criteria are not met.
  - **Acute toxicity estimate of the mixture (ATE) - Calculation method:**

· <b>LD/LC50 values relevant for classification:</b>		
<b>ATE (Acute Toxicity Estimates)</b>		
Oral	LD50	5844 mg/kg (Rat)
<b>CAS: 64-17-5 ethanol</b>		
Oral	LD50	6200 mg/kg (Rat) (IUCLID)
Inhalative	LC50	95.6 mg/l, 4 h (Rat) (RTECS)
<b>CAS: 7447-41-8 lithium chloride</b>		
Oral	LD50	526 mg/kg (Rat) (RTECS)

- **Primary irritant effect:**
  - **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 6)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 5)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **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.

## 11.2 Information on other hazards

### · Endocrine disrupting properties

The substance/mixture does not contain components that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

## SECTION 12: Ecological information

### · 12.1 Toxicity

#### · Aquatic toxicity:

#### CAS: 64-17-5 ethanol

EC50	9268 – 14221 mg/l, 48 h (Daphnia magna) (IUCLID)
EC5	6500 mg/l, 16 h (Pseudomonas putida) (IUCLID)
LC50	8140 mg/l, 48 h (Leuciscus idus) (IUCLID)

- **12.2 Persistence and degradability** The organic part of the mixture is easily biodegradable.

### · 12.3 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

- **12.4 Mobility in soil** No further relevant information available.

### · 12.5 Results of PBT and vPvB assessment

This product does not contain components classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in concentrations of 0.1% or higher.

### · 12.6 Endocrine disrupting properties

The substance/mixture does not contain components that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

### · 12.7 Other adverse effects

#### · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.

## SECTION 13: Disposal considerations

### · 13.1 Waste treatment methods

#### · Recommendation

Disposal must comply with the relevant local regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

#### · European waste catalogue

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 07 00	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 04*	other organic solvents, washing liquids and mother liquors

(Contd. on page 7)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 6)

· **Uncleaned packaging:**


· **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

· <b>14.1 UN number or ID number</b>	
· ADR/RID, IMDG, IATA	UN1170
· <b>14.2 UN proper shipping name</b>	
· ADR/RID, IMDG	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
· IATA	ETHANOL SOLUTION
· <b>14.3 Transport hazard class(es)</b>	
· ADR/RID, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· <b>14.4 Packing group</b>	
· ADR/RID, IMDG, IATA	II
· <b>14.5 Environmental hazards:</b>	
· Marine pollutant:	No
· <b>14.6 Special precautions for user</b>	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
· Stowage Category	A
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· ADR/RID	
· Excepted quantities (EQ):	E2
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	D/E
· UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

## SECTION 15: Regulatory information

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

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

(Contd. on page 8)

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 6 (replaces version 5)

Revision: 02.10.2025

Trade name: L 5034

(Contd. of page 7)

- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS** (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

### · **Relevant phrases**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

- **Date of previous version:** 26.01.2023

- **Version number of previous version:** 5

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord relatif au transport international 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 Harmonised 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 (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2