

Date of issue: 20.03.2009

n.ap. = not applicable

n.av. = not available

Version: 0020

SI Analytics

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation

Trade name **Lithiumchlorid in Ethanol**Product number **scho0006**Substance code **L 5034**

1.2 Use of the substance/preparation

The product is used as a laboratory chemical.

1.3 Company/undertaking identification

Address: SI Analytics GmbH

Geb. G12

Hattenbergstrasse 10

D-55122 Mainz

Information: Telephone: int+49-(0)6131-66-5051 or -5116

Fax: int+49-(0)6131-66-5001

e-mail-address of the competent person responsible for this Safety Data Sheet:

urban-finking.gefstoff@t-online.de

1.4 Emergency telephone

Beratungsstelle für Vergiftungserscheinungen und Embryonaltoxikologie, Berlin

Telephone: int+49-(0)30 - 19240

2. Hazards identification

2.1 Hazards identification

Highly flammable within the meaning of the current version of Directive 1999/45/EC.

2.2 Critical hazards to man

The product is highly flammable.

Vapours can form an explosive mixture with air.

2.3 Critical hazards to the environment

The product is classified as low hazardous to water.

3. Composition/information on ingredients

This product is a preparation. It is a solution of lithium chloride in ethanol.

3.1 Substances presenting a health / environmental hazard within the meaning of Directive 67/548/EEC

CAS number	EC number	Identification	m %	Symbols	R phrases
64-17-5	200-578-6	ethanol	> 90	F	11

The product requires a hazard warning label in accordance with EC directives/German regulations on hazardous substances (see heading 15.). Full text of the R phrases see heading 16.2.

3.2 Substances for which there are Community workplace exposure limits, which are not already included under heading 3.1 (see also heading 8.)

No substances.

3.3 Additional information

None.

4. First aid measures

4.1 General information

Change soaked clothing.

4.2 after inhalation

Ensure supply of fresh air.

4.3 after contact with skin

In case of contact with skin wash off immediately with plenty of water.

4.4 after contact with eyes

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

4.5 after ingestion

Let plenty of water be drunk immediately. Never give anything by mouth to an unconscious person.

Do not induce vomiting. Take medical treatment.

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4.6 Hints for the physician**Symptoms**

The following symptoms may occur: daze, vomiting, narcotic effect.

Hazards

Can be absorbed through the skin. Risk of pulmonary oedema and respiratory disorders.

Treatment

Treat symptomatically. Do not induce vomiting.

4.7 First aid equipment

Emergency eyewash should be provided in the immediate working surroundings.

4.8 Additional remarksNone.

5. Fire-fighting measures**5.1 Suitable extinguishing media**

Water spray jet, carbon dioxide, dry powder, alcohol-resistant foam.

5.2 Extinguishing media which must not be used for safety reasons

Full water jet.

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

In the event of fire the following can be released: carbon monoxide and carbon dioxide.

Vapours can form an explosive mixture with air. Beware of back ignition.

5.4 Special protective equipment for fire-fighters

Use self-contained breathing apparatus.

5.5 Further information

Do not inhale explosion and/or combustion gases. Cool endangered containers with water spray jet.

Use only explosion-proof equipment.

Contaminated firefighting water must be disposed of in accordance with the local regulations.

6. Accidental release measures**6.1 Personal precautions** (see also heading 8., Personal protective equipment)

Ensure adequate ventilation.

Keep away sources of ignition.

6.2 Environmental precautions (see also heading 13., Disposal considerations)

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods for cleaning up

Pick up with absorbent material (e.g. Chemisorb).

Send in suitable containers for recovery or disposal.

6.4 Additional informationNone.

7. Handling and storage (National measures see headings 15. and 16.)**7.1 Handling****7.1.1 Advice on safe handling**

Provide good room ventilation even at ground level (vapours are heavier than air).

Use solvent-resistant equipment.

7.1.2 Advice on protection against fire and explosion

Keep away from sources of ignition. Do not smoke. Take precautionary measures against electrostatic loading.

Use explosion-proof equipment/fittings and non-sparking tools. Wear shoes with conductive soles.

Vapours can form an explosive mixture with air. Beware of back ignition.

Ignitable mixtures can form in the empty container.

7.2 Storage**7.2.1 Requirements for storage rooms and vessels**

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

7.2.2 Advice on storage compatibility

Do not store together with oxidising agents and combustible materials.

7.2.3 Further information on storage conditions

Recommended storage temperature: 15 - 25 °C. Provide solvent-resistant floor.

Take precautionary measures against electrostatic loading.

7.2.4 Storage class (for Germany only)

LGK 3 (Flammable liquid substances) in accordance with the VCI Guideline for the mixed storage of chemicals.

7.3 Specific use(s)No information about specific uses available.

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Product number: **scho0006****8. Exposure controls/Personal protection****8.1 Exposure limit values**

CAS number	Identification	Limit values	Remarks
64-17-5	ethanol	1000 ml/m ³	national limit value – eight hours for U.K.

8.2 Exposure controls

See also heading 7.1.

Additional advice on system design

The German Operational Safety Regulation (Betriebssicherheitsverordnung) in accordance with Directive 1999/92/EC has to be observed.

8.2.1 Occupational exposure controls**Personal protective equipment****Respiratory protection**

If ventilation is insufficient, use a respiratory protection apparatus (filter type A).

Hand protection

Protective gloves (solvent-resistant).

Suitable: butyl rubber (0.5 mm; breakthrough time ≥ 8 h);
fluorinated rubber (0.4 mm; breakthrough time ≥ 8 h);
neoprene (0.5 mm; breakthrough time ≥ 2 h).**Eye protection**

Safety glasses.

Body protection

Light protective clothing, solvent-resistant and anti-static.

General protective measures and hygiene measures

Do not inhale vapours. Avoid contact with eyes and skin. At work do not eat, drink, smoke.

Remove soiled or soaked clothing immediately. Wash hands before breaks and after work. Use barrier skin cream.

Set out skin protection guidelines. Emergency eyewash should be provided in the immediate working surroundings.

Environmental exposure controls

See heading 6.

9. Physical and chemical properties**9.1 General information****Physical state:** liquid**Colour:** colourless**Odour:** characteristic**9.2 Important health, safety and environmental information**

pH (as supplied):	n.av.	(of an aqueous solution):	n.av.
Boiling point / boiling range (°C):	approx. +78		
Melting point / melting range (°C):	approx. -115		
Thermal decomposition (°C):	n.av.		
Flash point (°C), c.c.:	approx. +12		
Flammability (solid, gas):	n.ap.		
Ignition temperature (°C):	approx. +425		
Autoflammability:	n.av.		
Oxidising properties:	n.ap.		
Lower explosion limit:	3.5%	Upper explosion limit:	15%
Vapour pressure:	approx. 40 mbar (25°C)		
Relative density / Bulk density:	0.795 g/cm ³		
Solubility in water:	soluble		
Soluble in:	most organic solvents		
Partition coefficient n-octanol/water:	- 0.3 (ethanol)		
Viscosity (25°C):	1.4 mm ² /s		
Solvent content:	> 90%		

9.3 Other information

Vapours are heavier than air.

10. Stability and reactivity**10.1 Conditions to avoid**

Vapours can form an explosive mixture with air. Containers are liable to burst if temperature rises.

10.2 Materials to avoid

Violent reactions with strong oxidising agents.

Reactions with alkali metals and alkaline earth metals with evolution of hydrogen.

Reactions with alkali metal oxides, non-metal halides, hydrides, fluorine, mercury compounds, silver compounds..

10.3 Hazardous decomposition products

Carbon monoxide, carbon dioxide, flammable vapours.

10.4 Additional information

Unsuitable material: several plastics, rubber.

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11. Toxicological information**11.1 Toxicokinetics, metabolism and distribution**

No data are available for the product.

11.2 Acute effects (acute toxicity, irritation and corrosivity)

LD50 rat, oral	(mg/kg)	7060	(ethanol)	(RTECS)
LD50 rabbit, dermal	(mg/kg)	n.av.		
LC50 rat, inhalation	(mg/l/4h)	124.7	(ethanol)	(IUCLID)
Irritant effect on skin (rabbit)		no irritation	(ethanol)	(OECD 404)
Irritant effect on eyes (rabbit)		no irritation	(ethanol)	(OECD 405)

11.3 Sensitisation

No evidence of sensitive properties of the substances contained in this product has been found.

11.4 Repeated dose (sub-acute, sub-chronic, chronic)

No data are available for the product.

11.5 CMR effects (carcinogenicity, mutagenicity, toxicity for the reproduction)

Carcinogenicity	n.av.
Mutagenicity	n.av.
Toxicity for the reproduction	n.av.

11.6 Comprehensive evaluation of the CMR properties of substances subject to registration

No data available.

11.7 Experiences made in practice

Causes a state of intoxication. When inhaled in larger quantities, the solvent vapours cause a narcotic effect.
Can be absorbed through the skin. Risk of pulmonary oedema and respiratory disorders.
Liver damage is possible. Irritation of the eyes possible.
Has a degreasing effect on the skin. Frequent persistent contact with the skin can cause dermatitis.

11.8 General remarks

The product has not been tested. The product was classified on the basis of the calculation procedure of the Directive 1999/45/EC.
Labelling on the basis of ethanol.

12. Ecological information**12.1 Ecotoxicity****Aquatic toxicity**

LC50	(fish)	8140 mg/l/48 h (leuciscus idus; golden orfe)	(ethanol)	(IUCLID)
EC50	(daphnia)	9268 – 14221 mg/l/48 h (daphnia magna)	(ethanol)	(IUCLID)
IC50	(algae)	n.av.		

Behaviour in sewage works:

Treat by state-of-the-art technology before discharging into drains.

12.2 Mobility

The product has not been tested.

12.3 Persistence and degradability

Ethanol: biodegradation 94% (aqueous solution) (OECD 301 E). Readily biodegradable.

12.4 Bioaccumulative potential

Partition coefficient n-octanol/water: - 0.3 (ethanol)
No bioaccumulation is to be expected (log Pow <1).

12.5 Results of PBT assessment

No data available.

12.6 Other adverse effects

Ozone depletion potential	n.av.
Photochemical ozone creation potential	n.av.
Global warming potential	n.av.
AOX-hint	Not to apply.

12.7 Further information

Chemical oxygen demand (COD)	1.99 g/g	(ethanol)	(IUCLID)
Biochemical oxygen demand (BOD ₅)	0.9 kg/l	(ethanol)	(IUCLID)

The product is classified as low hazardous to water.

Contains according to the formulation following compounds of directives 2006/11/EC and 80/68/EEC:
None.

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13. Disposal considerations**13.1 Product / unused product**

Waste disposal corresponding to European Waste Catalogue.
Wastes must be classified with respect to their origin and depending on different processing steps. The waste codes mentioned as follows are only constituted as our recommendations.

Referring to the particular case they should be completed or revised.

Waste type
Waste notation

Wastes from organic chemical processes
Waste from the manufacture, formulation, supply and use of fine chemicals and chemical products not otherwise specified

EC waste code

07 07 04 other organic solvents, washing liquids and mother liquors

Disposal operations

D 10 Incineration on land

Recovery operations

R 2 Solvent reclamation/regeneration

13.2 Contaminated packaging

Recommendation

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed off as product waste.

Recommended cleansing agent

Water

14. Transport information**14.1 Land transport ADR / RID**

UN-No.: 1170

Class: 3

Classification code: F1

Packing group: II

Tunnel restriction code: (D/E)

Danger label: 3



Name of the good: ETHANOL

14.2 Marine transport IMDG-Code

Class: 3

Subsidiary Risk: -



UN-No.: 1170

Packing group: II

EmS: F-E, S-D

Proper Shipping Name: ETHANOL

14.3 Air transport IATA-DGR

UN/ID-No.: 1170

Class: 3

Packing group: II

Subsidiary Risk: -

Hazard Label: Flammable Liquids



Proper Shipping Name: Ethanol

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15. Regulatory information**15.1 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for a substance in the product.

15.2 Labelling in accordance with Directive EC

Symbol(s) of danger:



Indication(s) of danger:

Highly flammable

Hazardous component(s) to be indicated on label:

R phrases: R11

Highly flammable.

S phrases: S7
S16Keep container tightly closed.
Keep away from sources of ignition - No smoking.

Special labelling for certain preparations:

n.ap.

Remarks:

None.

15.3 Further Community legislationDirective 96/82/EC for danger control following severe accidents with dangerous substances:
annex 1, part 2 category 6: observe quantity limits according to R phrases.

Explosive atmospheres, hazardous places: Directives 94/9/EC and 1999/92/EC must be observed.

Observe Directive 98/24/EC for employee health protection against the threat of chemical substances in the workplace.

Observe employment restrictions under the law for the protection of young people at work (94/33/EC).

15.4 National measures (for Germany only)

Indications on restriction of occupation:

Youth Employment Protection Act must be observed

Major-accident Regulation:

Annex I, list of substances: No 7b

Fire and explosion hazards:

Annex III No 1 and Article 12 German Ordinance on Hazardous Substances; Operational Safety Regulation (Betriebssicherheitsverordnung) in accordance with Directive 1999/92/EC has to be observed

Regulation on clean air (TA Luft):

Number 5.2.5 has to be observed

Water hazard class:

1 (calculation according to KBwS)
The Federal State Enactment for Facilities to Handle Water Endangering Substances (German VAWS-Anlagenverordnung) has to be observed.German Ordinance on Hazardous Substances
(in accordance with Directive 98/24/EC):

Articles 7, 8, 9, 14, 15

16. Other information**16.1 Keeping (restrictions)**Article 8 (6), (7) and (8) German Ordinance on Hazardous Substances (for Germany only)
for industry consumer**Distribution****16.2 Full text of the R phrases referred to under heading 3 of the Safety Data Sheet**

R11: Highly flammable.

16.3 Technical contact point

SI Analytics GmbH, Herr Dr. M. Lange

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SI Analytics GmbH, Herr H. Becker

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Version 0020: replacement of version 0019 dated 31.01.2009

Revised headings: page headers, 1.3, 16.3 (change of company identification)

16.4 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.

Compiled by:

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