

Date of issue: 20.03.2009

n.ap. = not applicable

n.av. = not available

Version: 0019

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 Eisessig**Product number **scho0005**Substance code **L 5014**

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

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

2.2 Critical hazards to man

Causes severe burns.

The product is flammable. Vapours can form an explosive mixture with air at temperatures above 40°C.

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 acetic acid.

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
64-19-7	200-580-7	acetic acid	> 90	C	10-35

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

Remove contaminated, soaked clothing immediately and dispose of safely.

4.2 after inhalation

Remove the casualty into fresh air and keep him calm. In the event of symptoms take medical treatment.

4.3 after contact with skin

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

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 (risk of perforation and aspiration). Do not attempt to neutralise. Call physician immediately.

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	Geb. G12, Hattenbergstrasse 10, D-55122 Mainz	Date of issue: 20.03.2009
Product number:	scho0005	

4.6 Hints for the physician**Symptoms****Hazards**

The following symptoms may occur: nausea, vomiting, dyspnoea, gastric spasms, acidosis. Risk of burns, of perforation of gullet, of pulmonary oedema, bronchitis and pneumonia. After contact with the eyes risk of blindness and corneal clouding.

Treatment

If swallowed, in the event of vomiting, risk of product entering the lungs.

4.7 First aid equipment

In the immediate working surroundings emergency shower and eye wash must be installed. Label their location conspicuously.

4.8 Additional remarks

None.

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, carbon dioxide, flammable and corrosive gases/vapours.

Vapours can form an explosive mixture with air at temperatures above 40°C.

5.4 Special protective equipment for fire-fighters

Use self-contained breathing apparatus. In case of severe pollution content wear full protective suit.

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 (firefighting water reacts acidic).

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

Use personal protection. Ensure adequate ventilation. Keep away sources of ignition.

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

Suppress vapours with water spray jet.

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

6.3 Methods for cleaning up

Dilute with water and neutralise with e.g. caustic soda solution, sodium bicarbonate, calcium carbonate.

Pick up with absorbent material (e.g. Chemisorb). Send in suitable containers for recovery or disposal.

6.4 Additional information

None.

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

Open and handle container with care. Use acid-resistant and solvent-resistant equipment.

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

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.

Vapours can form an explosive mixture with air at temperatures above 40°C.

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 alkalies, oxidising agents and combustible materials.

7.2.3 Further information on storage conditions

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

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.

Trade name: **Lithiumchlorid in Eisessig**
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Geb. G12, Hattenbergstrasse 10, D-55122 Mainz
 Product number: **scho0005**

Date of issue: 20.03.2009

8. Exposure controls/Personal protection**8.1 Exposure limit values**

CAS number	Identification	Limit values	Remarks
64-19-7	acetic acid	10 ml/m ³ (8 h) indicative occupational exposure limit value	Community workplace exposure limit according to Directive 91/322/EEC

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 E).

Hand protection

Protective gloves (acid-resistant).

Suitable: butyl rubber (0.5 mm; breakthrough time ≥ 8 h);
 PVC (0.5 mm; breakthrough time ≥ 1 h).

Eye protection

Tightly fitting safety glasses.

Body protection

Acid-resistant protective clothing.

General protective measures and hygiene measures

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

Remove contaminated, soaked clothing immediately and dispose of safely.

Storage of foodstuffs in work rooms is forbidden.

Wash hands before breaks and after work.

Use barrier skin cream.

Set out skin protection guidelines.

In the immediate working surroundings emergency shower and eye wash must be installed.

Label their location conspicuously.

Environmental exposure controls

See heading 6.

9. Physical and chemical properties**9.1 General information****Physical state:** liquid**Colour:** colourless**Odour:** pungent, of acetic acid**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. +119

Melting point / melting range (°C):

approx. +16

Thermal decomposition (°C):

n.av.

Flash point (°C), c.c.:

+40

Flammability (solid, gas):

n.ap.

Ignition temperature (°C):

+485

Autoflammability:

n.ap.

Oxidising properties:

n.ap.

Lower explosion limit:

4%

Upper explosion limit:

17%

Vapour pressure:

approx. 50 mbar (25 °C)

Relative density / Bulk density:

1.09 g/cm³

Solubility in water:

soluble

Soluble in:

several organic solvents

Partition coefficient n-octanol/water:

- 0.2 (acetic acid)

Viscosity (25 °C):

1.51 mm²/s**9.3 Other information**

Vapours are heavier than air.

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	Geb. G12, Hattenbergstrasse 10, D-55122 Mainz	Date of issue: 20.03.2009
Product number:	scho0005	

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

Vapours can form an explosive mixture with air at temperatures above 40 °C.
Containers are liable to burst if temperature rises.

10.2 Materials to avoid

Violent reactions with strong alkalis and oxidising agents (e.g. chromium trioxide, potassium permanganate, sodium peroxide, perchloric acid, phosphorus trichloride, hydrogen peroxide, chromosulfuric acid).
Reactions with anhydrides/water, alcohols, halogens, halogen compounds, non-metal halides and ethylene glycol.
Risk of polymerisation with acetaldehyde. Reactions with base metals, with evolution of hydrogen.

10.3 Hazardous decomposition products

Carbon monoxide, carbon dioxide, flammable vapours, corrosive gases/vapours.

10.4 Additional information

Suitable material: glass, aluminium, polyethylene, Teflon.
Unsuitable material: iron, zinc, copper, brass and rubber.

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)	3310	(acetic acid)	(RTECS)
LD50 rabbit, dermal	(mg/kg)	1060	(acetic acid)	(RTECS)
LC50 rat, inhalation	(mg/l/4h)	11.4	(acetic acid)	(RTECS)
Irritant effect on skin		n.av.		
Irritant effect on eyes		n.av.		

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

Corrosive action on the skin, eyes and mucous membrane (acetic acid > 90%). Causes severe burns.
Persistent inhalation of high concentrations of the product can cause serious damage to the lungs.
After contact with the eyes risk of blindness and corneal clouding.
Ingestion may cause severe burns to the mucous membranes of the mouth, throat, oesophagus and stomach.
Risk of perforation of the oesophagus and risk of bleeding and ulceration in the gastro-intestinal tract.
Risk of kidney damage.

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 acetic acid > 90%.

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

LC50	(fish)	75 mg/l/96 h (Lepomis macrochirus; bluegill sunfish)	
		(acetic acid)	(IUCLID)
EC50	(daphnia)	47 mg/l/24 h (Daphnia magna) (acetic acid)	(IUCLID)
IC50	(algae)	n.av.	

Behaviour in sewage works:

The product is an acid.
The product needs to apply neutralising agents before draining to wastewater treatment plants.

12.2 Mobility

The product has not been tested.

12.3 Persistence and degradability

The product has not been tested.

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Product number:	scho0005	

12.4 Bioaccumulative potential

Partition coefficient n-octanol/water: - 0.2 (acetic acid)
 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) n.av.
 Biochemical oxygen demand (BOD) n.av.
 The product is classified as low hazardous to water.
 Harmful effect due to pH shift.

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

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.
 Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
 Separately collected fractions
 20 01 14 acids
 D 10 Incineration on land
 R 6 Regeneration of acids or bases

Waste type

Waste notation

EC waste code

Disposal operations

Recovery operations

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.

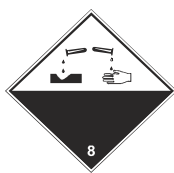
Recommended cleansing agent

Water

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

UN-No.: 2789
 Classification code: CF1
 Tunnel restriction code: (E)
 Danger label: 8 + 3

Class: 8
 Packing group: II



Name of the good: ACETIC ACID, GLACIAL

14.2 Marine transport IMDG-Code

Class: 8

Subsidiary Risk: 3



UN-No.: 2789
 EmS: F-E, S-C
 Proper Shipping Name: ACETIC ACID, GLACIAL

Packing group: II

Trade name: **Lithiumchlorid in Eisessig**
 Company/Undertaking: **SI Analytics GmbH**
Geb. G12, Hattenbergstrasse 10, D-55122 Mainz
 Product number: **scho0005**

Date of issue: 20.03.2009

14.3 Air transport IATA-DGR

UN/ID-No.: 2789 Class: 8
 Packing group: II Subsidiary Risk: 3
 Hazard Label: Corrosive & Flammable Liquids



Proper Shipping Name: Acetic acid, glacial

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:
 Hazardous component(s) to be indicated on label:

Corrosive
 Acetic acid > 90%

R phrases: R10
 R35

Flammable.
 Causes severe burns.

S phrases: S23
 S26

S45

Do not breathe vapour.
 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Special labelling for certain preparations:

n.ap.

Remarks:

None.

15.3 Further Community legislation

Directive 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:

Major-accident Regulation:
 Fire and explosion hazards:

Youth Employment Protection Act must be observed
 Annex I, list of substances: No 6 (flammable)
 Annex III No 1 and Article 12 German Ordinance on Hazardous Substances; Operational Safety Regulation (Betriebssicherheitsverordnung) in accordance with EC-Directive 1999/92/EC has to be observed
 Class II, number 5.2.5
 1 (calculation according to KBwS)
 The Federal State Enactment for Facilities to Handle Water Endangering Substances (German VAWs—Anlagenverordnung) has to be observed.

Regulation on clean air (TA Luft):
 Water hazard class:

German Ordinance on Hazardous Substances
 (in accordance with Directive 98/24/EC):

Articles 7, 8, 9, 14 and 15

Trade name:	Lithiumchlorid in Eisessig	
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Product number:	scho0005	

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**

R10: Flammable.

R35: Causes severe burns.

16.3 Technical contact point

SI Analytics GmbH, Herr Dr. M. Lange

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

SI Analytics GmbH, Herr H. Becker

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

Version 0019: replacement of version 0018 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.

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