

Safety data sheet	rotronic
MSDS_50%rF_2017_EN.docx	Safety data sheet in accordance with Regulation (EC) No. 1907/2006 Version 4.0 Revised 17.05.2017 Printed on 14.07.2017

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

1.1 Product identifiers

Product name	Humidity Standard 50 %RH
Product number	EA50-SCS
Brand	ROTRONIC
REACH no.	There is no registration number available for this substance because the substance or its use is exempted from registration, the annual tonnage does not require registration or registration is planned for a later point in time.
CAS no.	7447-41-8

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

Identified uses	Suitable only for the calibration of humidity meters
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1.3 Details of the supplier of the safety data sheet

Company	ROTRONIC AG Grindelstrasse 6 CH-8303 Bassersdorf	ROTRONIC Messgeräte GmbH Einsteinstrasse 17-23 D-76275 Ettlingen
Telephone	+41 44 838 11 11	+49 7243 383 250
Fax	+41 44 836 43 64	+49 7243 383 260
Email address		

1.4 Emergency telephone number

Emergency telephone no.	Tox Info Suisse +41 44 251 51 51 (145)	Munich Poison Information Center (<i>Giftnotruf München</i>) +49 89 19240
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SECTION 2: Hazards identification


2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

Acute toxicity, oral (Category 4)	H302
Skin corrosion (Category 2)	H315
Eye irritant (Category 2)	H319

The complete text descriptions of the hazard statements mentioned in this section can be found in section 16.

2.2 Label elements

Pictogram		
Signal word	Warning	
Hazard statement(s)	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
Precautionary statement(s)	P301	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
	P312	
	P330	
	P305	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P351		
P338		

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Supplemental hazard statements	None
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2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	Calibration solution, aqueous solution of CLi and distilled H ₂ O
Formula	CLi
Molecular weight	42.39 g/mol
CAS no.	7447-41-8
EC no.	231-212-3

Hazardous constituents according to Regulation (EC) No. 1272/2008

Constituent		Classification	Concentration
Lithium chloride			
CAS no.	7447-41-8	Acute Tox. 4; Skin Irrit. 2; H302, H315, H319	25 -50 %
EC no.	231-212-3		
Water			
CAS no.	7732-18-5	-	50 - 75 %
EC no.	231-791-2		

For the full text of the H-statements and P-phrases mentioned in this section, see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Present this safety data sheet to the physician in attendance.

After inhalation

After inhalation, move the affected person into the fresh air. In the event of respiratory arrest, apply mouth to mouth resuscitation. Consult a physician.

After skin contact

Wash off with soap and plenty of water. Consult a physician.

After eye contact

Rinse thoroughly with plenty of water for at least fifteen minutes and consult a physician.

After swallowing

Never introduce anything through the mouth of an unconscious person. Rinse the mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described on the label (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical extinguishing agents or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, lithium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapors/mist/gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid contact with the substance. See section 8 for personal protective equipment.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Take up with an inert absorbent material and dispose of as waste requiring special supervision. Collect in suitable and sealed containers for disposal.

6.4 Reference to other sections

Disposal: see section 13

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Avoid contact with the eyes, skin and clothing. Avoid breathing vapor or mist. Suppress formation of aerosol.

See section 2.2 for information on precautions.

7.2 Conditions for safe storage, including any incompatibilities

Keep the ampoules sealed and unopened in a cool, dry and well-ventilated place. Store glass ampoules in their sealed original packaging and protect this from impacts.

7.3 Specific end uses

Except for the uses identified in section 1.2, no other specific uses are anticipated.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Components with workplace control parameters**

Constituent	CAS no.	Value/Type of exposure	Control parameters	Basis
Lithium chloride	7447-41-8	MAC value (inhalable dust)	0.2 mg/m ³	Limit values at workplace
	Remarks	National Institute for Occupational Safety and Health Damage to fetus unlikely if the MAC value is not exceeded.		
		STEL (inhalable dust)	0.2 mg/m ³	Limit values at workplace
		National Institute for Occupational Safety and Health Damage to fetus unlikely if the MAC value is not exceeded.		

8.2 Exposure controls

Appropriate engineering controls

Usual general occupational hygiene precautions.

The usual precautions for handling chemicals must be observed.

Wash your hands before breaks and at the end of work.

Personal protective equipment

Eye/face protection

Face protection and safety goggles. The eye protection you use must have been tested and approved in accordance with official standards, e.g. NIOSH (US) or EN 166 (EU).

Skin protection

Work with gloves. Gloves must be inspected before use. Use a suitable glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The protective gloves used must comply with the specifications of EC Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Breakthrough time: 480 min.

Tested material: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Breakthrough time: 480 min.

Tested material: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, telephone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN 374

If used in solution or mixed with other substances and under conditions which differ from EN 374, contact a supplier of CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and a safety professional familiar with the specific situation of anticipated use by our customers. It should not be construed as approval for any specific use scenario.

Body protection

Impermeable protective clothing. The type of protective equipment chosen must be suitable for the concentration and quantity of the hazardous substance at the workplace.

Respiratory protection

Is not necessary for the sole approved use for calibration of humidity measuring instruments.

Where protection against annoying dust concentrations is required, use a dust mask with particulate filter N100 (US) or a respirator mask with filter type P3 (EN 143).

The breathing apparatus and its components must have been tested and approved in accordance with national standards, e.g. NIOSH (US) or CEN (EU).

Hygiene measures

The usual precautions for handling chemicals must be observed. Wash hands before breaks, at the end of work and after proper and correct use for humidity calibration.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

a) Appearance	State: liquid Color: clear, colorless
b) Odor	Odorless
c) Odor threshold	Not applicable
d) pH value	4
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	130 °C at 1013 hPa
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	1.35 g/cm ³
n) Solubility	Completely soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available.

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

No data available.

10.2 Chemical stability

Stable under the specified storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Accidental opening of the ampoules or glass breakage.

10.5 Incompatible materials

Strong acids, strong oxidants bromine trifluoride.

10.6 Hazardous decomposition products

No data available.

In case of fire: see section 5.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

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LD50 Oral - rat	526 mg/kg
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Skin corrosion/irritation

Skin - rabbit	Skin irritation (OECD Test Guideline 404)
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Serious eye damage/irritation

Eyes - rabbit	Eye irritation (OECD Test Guideline 405)
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Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% has been identified by the IARC as a probable, possible or confirmed human carcinogen.

Reproductive toxicity

No data available.

Specific target organ toxicity (STOT) – single exposure

No data available.

Specific target organ toxicity (STOT) – repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

RTECS: OJ5950000

To our knowledge, the chemical, physical and toxicological properties have not been investigated thoroughly.

SECTION 12: Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

A PBT/vPvB assessment is not available because a chemical safety assessment was not required/not conducted.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

All national and local laws must be observed.

Commission an approved disposal company to dispose of residual quantities and solutions that can no longer be used. These products must be dissolved in or mixed with a flammable solvent and destroyed in an incinerator for chemicals (with afterburner and exhaust air scrubber).

Contaminated packaging

Disposal identical to unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID	-
IMDG	-
IATA	-

14.2 UN proper shipping name

ADR/RID	No dangerous good
IMDG	No dangerous good
IATA	No dangerous good

14.3 Transport hazard classes

ADR/RID	-
IMDG	-
IATA	-

14.4 Packing group

ADR/RID	-
IMDG	-
IATA	-

14.5 Environmental hazards

ADR/RID	No
IMDG Marine pollutant	No
IATA	No

14.6 Special precautions for user

Storage only in original packaging.

Handling only with suitable protective equipment (see section 8).

SECTION 15: Regulatory information

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

This safety data sheet fulfils the requirements under Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

No chemical safety assessment was performed for this product.

SECTION 16: Other information

Complete text descriptions of the hazard statements in section 2 and 3

Eye Irrit.	Eye irritation
Acute Tox.	Acute toxicity

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Skin Irrit.	Skin irritation
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation

Further information

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