

## Safety data sheet



MSDS\_5\_rh\_2024-2-EN

Safety data sheet  
according to Regulation (EC) No  
1907/2006  
Version 7.0 Revised 17.04.2024  
Print date 16.10.2024

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

### 1.1 Product identifier

|                            |                         |
|----------------------------|-------------------------|
| Product name / designation | Humidity standard 5 %rh |
| Product number             | EA05-SCS                |
| Brand                      | ROTRONIC                |
| UFI code                   | QCUE-C0KE-S00C-X4HH     |

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

|  |   |
|--|---|
| Areas of use [SU]                      | SU9 Production of fine chemicals  |
| Product categories [PC]                | PC21 Laboratory chemicals   |
| Application of the substance / mixture | Only suitable for calibrating of humidity meters<br>For professional users only |

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

|                              |  |  |
|------------------------------|--|--|
| Company                      | ROTRONIC AG<br>Grindelstrasse 6<br>CH-8303 Bassersdorf               | Process Sensing Technologies<br>PST GmbH<br>Max-Planck-Str. 14<br>D-61381 Friedrichsdorf |
| Telephone                    | +41 44 838 11 11   | +49 7243 6019000   |
| Email address                | measure@rotronic.ch  | de.rotronic.sales@processsensing.com   |
| Website                      | <a href="http://www.ProcessSensing.com">www.ProcessSensing.com</a>   |  |
| Providing information        | +41 44 838 11 11<br>(This number is only manned during office hours) |  |
| e-mail<br>(competent person) | pm@rotronic.ch   |  |

### 1.4 Emergency number

|                          |   |   |
|--------------------------|---|---|
| Switzerland / Germany    | Tox Info Suisse (CH)<br>+41 44 251 51 51 (145)                    | Poison Center D-Munich (DE)<br>+49 89 192 40                                  |
| United Kingdom / Ireland | Poisons Information<br>Centre, London (UK)<br>+44 845 46 47 (111) | National Poisons Information Centre<br>(NPIC), Dublin (IE)<br>+353 1 809 2166 |
| United States            | New York City Poison Control Center<br>1-800-222-1222             |   |

## Section 2: Possible dangers

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008 [CLP]

|                         |                    |
|-------------------------|--------------------|
| Acute Tox. 4, H302      | Calculation method |
| Skin Corr. 1B, H314     | Calculation method |
| Skin Sens. 1, H317      | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

#### Hazard warnings for health hazards

H302 Harmful if swallowed.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.

#### Hazard warnings for environmental hazards

H411 Toxic to aquatic life with long lasting effects.




#### Remark

The classification corresponds to the current EC lists, but is supplemented by information from specialised literature and company data.

The mixture is classified as hazardous according to Regulation (EC) No 1272/2008 [CLP].

### 2.2 Labelling elements

#### Classification according to Regulation (EC) No 1272/2008 [CLP]

|                               |   |   |
|-------------------------------|---|---|
| Hazard-determining components | Zinc bromide  |   |
| Pictogram                     |    |   |
|                               | GHS05   | GHS07 GHS09   |
| Signal word                   | Danger  |   |
| Hazard warnings               | H302  | Harmful if swallowed.   |
|                               | H314  | Causes severe skin burns and eye damage.  |
|                               | H317  | May cause allergic skin reactions.  |
|                               | H411  | Toxic to aquatic organisms, with long lasting effects.  |
| Safety instructions           | P273  | Avoid release into the environment.   |
|                               | P280  | Wear protective gloves/eye protection   |
|                               | P301<br>P312  | IF SWALLOWED:<br>Call a POISON CENTRE/doctor if you feel unwell.  |
|                               | P303<br>P361<br>P353  | IN CASE OF CONTACT WITH SKIN (OR HAIR):<br>Remove all contaminated clothing immediately. Wash skin with water.                      |
|                               | P305<br>P351<br>P338  | ON CONTACT WITH THE EYES:<br>Rinse gently with water for a few minutes.<br>Remove any contact lenses if possible. Continue rinsing. |
|                               | P501  | Dispose of contents/container to a recognized waste disposal facility.  |

### 2.3 Other dangers

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No data available

## Section 3: Composition/information on ingredients

### 3.1 Fabrics

Not applicable

### 3.2 Mixtures

#### Hazardous ingredients

| CAS No.    | EC no.    | REACH                  | Substance name          | Concentration       | Classification according to Regulation (EC) No 1272/2008 [CLP]                    | SCL/ M/ ATE          |
|------------|-----------|------------------------|-------------------------|---------------------|---|----------------------|
| 7699-45-8  | 231-718-4 | 01-21199490043-45-xxxx | Zinc bromide            | 57 - 63 % by weight | Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 2; H411 | ATE(Oral): 500 mg/kg |
| 71626-99-8 | 232-164-6 | #1                     | Calcium bromide hydrate | 23 - 30 % by weight | Reduced labelling (<= 125 ml) -none-  |                      |

#1

A registration number for this substance is not available because the substance or its use is exempted from registration, the annual tonnage does not require registration or registration is foreseen for a later date.

## Section 4: First aid measures

### 4.1 Description of first aid measures

#### General information

Remove soiled, soaked clothing immediately.

#### After inhalation

Provide fresh air.

Seek medical treatment in case of complaints.

If there is a risk of unconsciousness, position and transport in the recovery position.

#### After skin contact

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

#### After eye contact

In case of eye contact, rinse the eyes with water for a sufficient period of time with the eyelids open, then consult an ophthalmologist immediately.

#### After ingestion

DO NOT induce vomiting.

If swallowed, seek medical advice immediately and show this container or label. Rinse mouth thoroughly with water.

Drink plenty of water in small sips (dilution effect).

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

No data available.

### 4.3 Information on immediate medical assistance or specialised treatment

No data available.

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## Section 5: Firefighting measures

### 5.1 Extinguishing agent

#### Suitable extinguishing agents

Alcohol-resistant foam

Product itself does not burn; adapt extinguishing measures to surrounding fire.

Extinguishing powder

Carbon dioxide (CO<sub>2</sub>)

Water spray jet

#### Unsuitable extinguishing agents

Full water jet

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

#### Hazardous combustion products

Formation of hazardous gases possible in case of fire.

Can be released in case of fire:

Carbon monoxide Carbon dioxide (CO<sub>2</sub>)

### 5.3 Instructions for firefighting

#### Special protective equipment for firefighting

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

#### Additional information

The product itself does not burn.

Adapt extinguishing measures to the surroundings.

Use a water spray jet to protect persons and to cool containers in the danger zone.

---

## Section 6: Measures in the event of accidental release

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

#### Staff not trained for emergencies

Avoid contact with eyes and skin.

Ensure adequate ventilation. Use personal protective equipment.

### 6.2 Environmental protection measures

Do not allow to enter drains or waterways.

In the event of spillage into watercourses or sewers, inform the responsible authorities.

### 6.3 Methods and material for retention and cleaning

#### For retention

Ensure adequate ventilation.

Absorb residues with liquid-binding material (e.g. acid binder). Dispose of in suitable containers for recovery or disposal.

### 6.4 Reference to other sections

Safe handling: see section 7

Personal protective equipment: see section 8

Disposal: see section 13

|                            |   |
|----------------------------|---|
| <b>Safety data sheet</b>   | <b>rotronic</b><br>MEASUREMENT SOLUTIONS<br>A PST BRAND   |
| <b>MSDS_5_rh_2024-2-EN</b> | <b>Safety data sheet</b><br>according to Regulation (EC) No<br>1907/2006<br>Version 7.0 Revised 17.04.2024<br>Print date 16.10.2024 |

## Section 7: Handling and storage

### 7.1 Protective measures for safe handling

#### Protective measures

Avoid contact with eyes and skin.

The usual precautionary measures for handling chemicals must be observed.

The product is not: Flammable

Keep the packaging dry and well sealed to avoid contamination and absorption of moisture.

Store container in a cool, well-ventilated place.

Avoidance of: Eye contact Skin contact

#### Notes on general industrial hygiene

Do not eat, drink, smoke or snuff at the workplace.

Keep away from food and drink.

Wash hands before breaks and at the end of work.

### 7.2 Conditions for safe storage in consideration of incompatibilities

#### Requirements for storage rooms and containers

Keep/store only in the original container.

Keep container tightly closed. Suitable material for containers/systems:

Material, acid-resistant

Provide a retention tank, e.g. floor pan without drain.

#### Storage class

8B Non-flammable corrosive hazardous substances

#### Substances to avoid

Do not store together with: Food and animal feed

#### Further information on storage conditions

Keep container tightly closed and store in a cool, well-ventilated place. Protect from heat and direct sunlight.

### 7.3 Specific end uses

No data available

## Section 8: Exposure controls/personal protective equipment

### 8.1 Parameters to be monitored

No data available

### 8.2 Exposure controls and monitoring

#### Suitable technical control equipment

#### Technical measures to prevent exposure

Avoid contact with eyes and skin.

Ensure good room ventilation and, if necessary, extraction at the workplace.

#### Personal protective equipment

##### Eye/face protection

Safety goggles EN 166

##### Hand protection

Information on glove material [type, thickness, penetration time/wear time, wetting strength]: Nitrile rubber, butyl rubber; 0.5 mm; approx. 480 min.

Permeation level: 6

Penetration level according to EN374:3

Observe the glove manufacturer's instructions on permeability and breakthrough times and the special conditions at the workplace.

##### Body protection

Normal work clothes

##### Respiratory protection

No respiratory protection required

##### Additional notes

No occupational exposure limits (OEL) have been defined for the product.

## Section 9: Physical and chemical properties

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

|   |                    |
|---|--------------------|
| a) Aggregate state                        | Liquid             |
| b) Colour                                 | Clear, brownish    |
| c) Odour                                  | Characteristic     |
| d) Melting point/freezing point           | Not determined     |
| e) Boiling point                          | Not determined     |
| f) Flammability                           | Not determined     |
| g) Lower and upper explosion limit        | Not determined     |
| h) Flash point                            | Not determined     |
| i) Ignition temperature                   | Not determined     |
| j) Decomposition temperature              | Not determined     |
| k) pH value                               | 4,5                |
| l) Kinematic viscosity                    | Not determined     |
| m) Solubility                             | Completely soluble |
| n) Partition coefficient: n-octanol/water | Not determined     |
| o) Vapour pressure                        | Not determined     |

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|                            |                |
|----------------------------|----------------|
| p) Density                 | Not determined |
| q) Relative vapour density | Not determined |
| r) Particle properties     | Not determined |

### 9.2 Other information Other safety-related parameters

Explosive properties: The product is not explosive.

## Section 10: Stability and reactivity

### 10.1 Reactivity

Reactions with strong oxidising agents.

Reactions with alkalis (lyes).

### 10.2 Chemical stability

No data available

### 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

No data available

### 10.6 Hazardous decomposition products

No known hazardous decomposition products.

No decomposition when used as intended.

## Section 11: Toxicological information

### 11.1 Information on hazard classes according to Regulation (EC) No 1272/2008

#### Acute toxicity

#### Animal data

|                              | Active dose   | Method, evaluation | Source, remark |
|------------------------------|---|--------------------|----------------|
| Acute oral toxicity          | CAS-No.7699-45-8 Zinc<br>bromide<br>LD50: 500 mg/kg |                    |                |
| Acute dermal toxicity        | not determined                                      |                    |                |
| Acute inhalation<br>toxicity | not determined                                      |                    |                |

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### Corrosive/irritant effect on the skin

#### Animal data

| Result / Evaluation | Method | Source, remark |
|---------------------|--------|----------------|
| No data available   |        |                |

#### Assessment/classification

Causes severe burns.

### Serious eye damage/irritation

#### Assessment/classification

Causes severe burns.

### Sensitisation of the respiratory tract

Not determined

### Sensitisation of the skin

#### Animal data

| Result / Evaluation | Dose / concentration | Method | Source, remark |
|---------------------|----------------------|--------|----------------|
| No data available   |                      |        |                |

#### Assessment/classification

May cause sensitisation by skin contact.

#### Germ cell mutagenicity

Not determined

#### Carcinogenicity

Not determined

#### Reproductive toxicity

Not determined

#### Specific target organ toxicity - single exposure

Not determined

#### Specific target organ toxicity - repeated exposure

Not determined

#### Aspiration hazard

Not determined

## 11.2 Information on other hazards

#### Other information

Toxicological data are not available.

The product has not been tested.

The statement is derived from the properties of the individual components.

## Section 12: Environmental information

### 12.1 Toxicity



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### Aquatic toxicity

|   | Active dose    | Method, evaluation | Source, remark |
|---|----------------|--------------------|----------------|
| Acute (short-term) fish toxicity                        | not determined |                    |                |
| Chronic (long-term) fish toxicity                       | not determined |                    |                |
| Acute (short-term) toxicity to crustaceans              | not determined |                    |                |
| Chronic (long-term) toxicity to aquatic invertebrates   | not determined |                    |                |
| Acute (short-term) toxicity to algae and cyanobacteria  | not determined |                    |                |
| Chronic (long-term) toxicity to algae and cyanobacteria | not determined |                    |                |
| Toxicity to other aquatic plants/organisms              | not determined |                    |                |
| Toxicity for microorganisms                             | not determined |                    |                |

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

#### Estimation / categorisation

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of the PBT and vPvB assessment

No data available

### 12.6 Endocrine disrupting properties

No data available.

### 12.7 Other harmful effects

#### Additional ecotoxicological information

#### Additional information

Ecological data are not available.

Do not allow uncontrolled release of the product into the environment.

The product must not get into ground water or surface water.

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## Section 13: Notes on disposal

### 13.1 Waste treatment processes

#### Waste codes/waste designations according to EAK/AVV

Waste code      Product/Waste designation

|                   |  |
|-------------------|--|
| 160303 *inorganic | wastes containing hazardous substances                               |
| 160507 *Used      | inorganic chemicals consisting of or containing hazardous substances |

#### Proper disposal / product

Must be disposed of as hazardous waste in accordance with the regulations for the treatment of hazardous waste.

#### Proper disposal / packaging

Completely emptied packaging can be recycled.

Non-contaminated and completely emptied packaging can be recycled. Contaminated packaging must be treated in the same way as the substance.

#### Remark

Proof of disposal is required.

## Section 14: Transport details

### 14.1 UN number or ID number

|                                    |         |
|------------------------------------|---------|
| Land transport (ADR/RID)           | UN 3264 |
| Sea transport (IMDG)               | UN 3264 |
| Air transport (ICAO-TI / IATA-DGR) | UN 3264 |

### 14.2 UN proper shipping name

|                                    |  |
|------------------------------------|--|
| Land transport (ADR/RID)           | Corrosive Acidic inorganic liquid, N.O.S. (Zinc bromide)   |
| Sea transport (IMDG)               | Corrosive Liquid, Acidic, Inorganic, N.O.S. (Zinc bromide) |
| Air transport (ICAO-TI / IATA-DGR) | Corrosive Liquid, Acidic, Inorganic, N.O.S. (Zinc bromide) |

### 14.3 Transport hazard classes

|                                    |   |
|------------------------------------|---|
| Land transport (ADR/RID)           | 8 |
| Sea transport (IMDG)               | 8 |
| Air transport (ICAO-TI / IATA-DGR) | 8 |

### 14.4 Packaging group

|                                    |     |
|------------------------------------|-----|
| Land transport (ADR/RID)           | II  |
| Sea transport (IMDG)               | III |
| Air transport (ICAO-TI / IATA-DGR) | III |

### 14.5 Environmental hazards

|                          |   |
|--------------------------|---|
| Land transport (ADR/RID) | Environmentally hazardous                   |
| Sea transport (IMDG)     | Environmentally hazardous, marine pollutant |

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|                                    |                           |
|------------------------------------|---------------------------|
| Air transport (ICAO-TI / IATA-DGR) | Environmentally hazardous |
|------------------------------------|---------------------------|

### 14.6 Special precautions for the user

No data available

### 14.7 Transport of bulk goods by sea in accordance with IMO instruments

No data available

#### Land transport (ADR/RID)

|                          |  |
|--------------------------|--|
| UN number or ID number   | UN 3264  |
| Proper UN shipping name  | CORROSIVE ACID ANORGANIC LIQUID, N.O.S. (zinc bromide) |
| Transport hazard classes | 8  |
| Hazard label             | 8  |
| Classification code      | C1   |
| Packaging group          | II   |
| Environmental hazards    | ENVIRONMENTALLY HAZARDOUS                              |
| Limited quantity (LQ)    | 1 L  |
| Special regulations      | 274  |
| Tunnel restriction code  | E  |

#### Remark

Additional labelling with fish and tree symbol.

#### Sea transport (IMDG)

|                          |  |
|--------------------------|--|
| UN number or ID number   | UN 3264  |
| Proper UN shipping name  | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Zinc Bromide) |
| Transport hazard classes | 8  |
| Packaging group          | III  |
| Environmental hazards    | ENVIRONMENTALLY HAZARDOUS                                  |
| Limited quantity (LQ)    | 5 L  |
| Marine pollutant         | Yes  |
| EmS                      | F-A, S-B   |

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

|                          |   |
|--------------------------|---|
| UN number or ID number   | UN 3264                                     |
| Proper UN shipping name  | Corrosive liquid, acidic, inorganic, n.o.s. |
| Transport hazard classes | 8   |
| Packaging group          | III   |
| Environmental hazards    | ENVIRONMENTALLY HAZARDOUS                   |

## Section 15: Legislation

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

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

#### Restrictions on use

None for professional users.

### 15.2 Chemical safety assessment

#### National regulations

Chemical safety assessments for substances in this mixture have not been carried out.

## Section 16: Other information

### Abbreviations and acronyms

Acute Tox. 4, H302: Acute toxicity (oral), Category 4  
Skin Corr. 1B: Skin corrosion, subcategory 1B  
Skin Sens. 1: Skin allergen, Category 1  
Aquatic Chronic 2: Long-term (chronic) aquatic hazard, Category 2

### Additional notes

Existing national and local laws regarding chemicals must be observed.

The information in this safety data sheet is correct to the best of our knowledge, information and belief at the date of printing. The information is intended to provide you with guidelines for the safe handling of the product mentioned in this safety data sheet during storage, processing, transport and disposal. The information is not transferable to other products. If the product is mixed, blended or processed with other materials or subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise.

### Wording of H and EUH phrases (number and full text)

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.

### Further information

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