

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 14.06.2023

Version number 1

Revision: 14.06.2023

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

· **1.1 Product identifier**

· **Trade name:** Ruthenium Ru - 1000 mg/l in diluted HCl for ICP (LK1-00440401)

· **Registration number**

A registration number is not available for this substance as the substance or its uses are exempted for registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

No further relevant information available.

· **Application of the substance / the mixture** Laboratory Reagent

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

· **Manufacturer/Supplier:**

CPAchem Ltd.  
2 Ivanka Terzieva Str.  
Bogomilovo 6065  
Stara Zagora, BULGARIA  
info@cpachem.com

LabKings  
Utrechtseweg 5,  
1213 TK Hilversum  
The Netherlands  
info@labkings.com

· **Further information obtainable from:** Product safety department

· **1.4 Emergency telephone number:**

**EMERGENCY HEALTH INFORMATION:**

Austria +43 1 31304 5620, Belgium +32022649636, Bulgaria +359 2 9154 409, Croatia +38514686910, Cyprus +3572240561, Czech Republic +420267082257, Denmark +45 72 54 40 00, Estonia +3726943384, Finland +358 5052 000, France +33 3 85 21 92, Germany +49-30-18412-0, Greece +302106479250, Hungary +34 (1) 476 1136, Ireland +35318092566, Italy +390649906140, Latvia +371 67032600, Lithuania +370 70662008, Luxembourg +352 24785551, Netherlands +31 88 75 585 61, Norway +47 21 07 70 00, Poland +48 42 2530 400, Portugal +351213303271, Romania +40213183606, Slovakia +421 2 5465 2307, Slovenia +38614006039, Spain +34 917689800, Sweden +46104566750, United Kingdom (England or Wales) 0845 46 47 or Scotland 08454 24 24 24 (UK only).

### SECTION 2: Hazards identification

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

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

The product is not classified, according to the CLP regulation.

· **2.2 Label elements**

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

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Additional information:**

EUH210 Safety data sheet available on request.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture: consisting of the following components.

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**· Dangerous components:**

CAS: 7647-01-0 EINECS: 231-595-7 Index number: 017-002-00-X	hydrochloric acid ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; STOT SE 3, H335 Specific concentration limits: Skin Corr. 1B; H314: $C \geq 25\%$ Skin Irrit. 2; H315: $10\% \leq C < 25\%$ Eye Irrit. 2; H319: $10\% \leq C < 25\%$ STOT SE 3; H335: $C \geq 10\%$	5.0%
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· **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 doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
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).
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

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### SECTION 8: Exposure controls/personal protection

#### · 8.1 Control parameters

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

##### **7647-01-0 hydrochloric acid**

IOELV Short-term value: 15 mg/m<sup>3</sup>, 10 ppmLong-term value: 8 mg/m<sup>3</sup>, 5 ppm· **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:** Wash hands before breaks and at the end of work.· **Respiratory protection:** Not required.

##### · **Hand protection**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### · **Material of gloves**

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

##### · **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eyeface protection** Goggles recommended during refilling

### SECTION 9: Physical and chemical properties

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

##### · **General Information**

· **Physical state**

Fluid

· **Colour:**

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

100 – 110 °C (7647-01-0 hydrochloric acid)

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

Not applicable.

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **Viscosity:**· **Kinematic viscosity**

Not determined.

· **Dynamic:**

Not determined.

· **Solubility**· **water:**

Fully miscible.

· **Partition coefficient n-octanol/water (log value)**

Not determined.

· **Vapour pressure:**

Not determined.

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- |                                   |                 |
|-----------------------------------|-----------------|
| · Density and/or relative density |                 |
| · Density:                        | Not determined. |
| · Relative density                | Not determined. |
| · Vapour density                  | Not determined. |
- 
- |   |   |
|---|---|
| · 9.2 Other information   |   |
| · Appearance:   |   |
| · Form:   | Fluid   |
| · Important information on protection of health and environment, and on safety. |   |
| · Ignition temperature:   | Product is not selfigniting.                  |
| · Explosive properties:   | Product does not present an explosion hazard. |
| · Solvent content:  |   |
| · Solids content:   | 0.0 %   |
| · Change in condition   |   |
| · Evaporation rate  | Not determined.                               |
- 
- |   |      |
|---|------|
| · Information with regard to physical hazard classes                        |      |
| · Explosives  | Void |
| · Flammable gases   | Void |
| · Aerosols  | Void |
| · Oxidising gases   | Void |
| · Gases under pressure  | Void |
| · Flammable liquids   | Void |
| · Flammable solids  | Void |
| · Self-reactive substances and mixtures                                     | Void |
| · Pyrophoric liquids  | Void |
| · Pyrophoric solids   | Void |
| · Self-heating substances and mixtures                                      | Void |
| · Substances and mixtures, which emit flammable gases in contact with water | Void |
| · Oxidising liquids   | Void |
| · Oxidising solids  | Void |
| · Organic peroxides   | Void |
| · Corrosive to metals   | Void |
| · Desensitised explosives   | Void |

### SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 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.

### SECTION 11: Toxicological information

- 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- Acute toxicity Based on available data, the classification criteria are not met.

#### · LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	18,000 mg/kg (rabbit)
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- 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.

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- **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**

· <b>Endocrine disrupting properties</b>
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None of the ingredients is listed.
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### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                   | UN3264  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID)<br>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID) |

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## · 14.3 Transport hazard class(es)

## · ADR, IMDG, IATA



## · Class

8 Corrosive substances.

## · Label

8

## · 14.4 Packing group

## · ADR, IMDG, IATA

II

## · 14.5 Environmental hazards:

Not applicable.

## · 14.6 Special precautions for user

Warning: Corrosive substances.

## · Hazard identification number (Kemler code):

80

## · EMS Number:

F-A,S-B

## · Segregation groups

(SGG1a) Strong acids

## · Stowage Category

B

## · Stowage Code

SW2 Clear of living quarters.

## · Segregation Code

SG36 Stow "separated from" SGG18-alkalis.

SG49 Stow "separated from" SGG6-cyanides

## · 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

## · Transport/Additional information:

## · ADR

## · 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

E

## · IMDG

## · 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

## · UN "Model Regulation":

UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC,  
N.O.S. (HYDROCHLORIC ACID), 8, II

### SECTION 15: Regulatory information

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

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

## · Hazard pictograms Void

## · Signal word Void

## · Hazard statements Void

## · Directive 2012/18/EU

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

## · LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

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· **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**

7647-01-0 | hydrochloric acid

3

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

7647-01-0 | hydrochloric acid

3

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

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

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

· **Department issuing SDS:** Product safety department

· **Contact:** Mrs. Taralova

· **Abbreviations and acronyms:**

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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

EU