



RUBIDIUM-87 CHLORIDE (87Rb)

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 30/06/2015

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Version: 2.0

RBLM-4413

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

1.1. Product identifier

Product form : Substance
Substance name : RUBIDIUM-87 CHLORIDE (87Rb)
EC no : 232-240-9 (Unlabeled)
CAS No : 7791-11-9 (Unlabeled)
Product code : RBLM-4413
Formula : *RbCl

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810
USA

USA: 1-800-322-1174 Int: 1-978-749-8000
cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)
International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

Classification (GHS-US)

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

No labeling applicable

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

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SECTION 3: Composition/Information on ingredients

3.1. Substance

Name	Product identifier	%	Classification according to Directive 67/548/EEC
RUBIDIUM-87 CHLORIDE (87Rb) (Main constituent)	(CAS No) 7791-11-9 (Unlabeled) (EC no) 232-240-9 (Unlabeled)	100	Not classified

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
RUBIDIUM-87 CHLORIDE (87Rb) (Main constituent)	(CAS No) 7791-11-9 (Unlabeled) (EC no) 232-240-9 (Unlabeled)	100	Not classified

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	Classification (GHS-US)
RUBIDIUM-87 CHLORIDE (87Rb) (Main constituent)	(CAS No) 7791-11-9 (Unlabeled)	100	Not classified

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/injuries after eye contact	: May cause eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Wear self contained breathing apparatus for fire fighting if necessary.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not let product enter drains.

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6.3. Methods and material for containment and cleaning up

For containment : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.

Storage conditions : Store at room temperature away from light and moisture.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Materials for protective clothing : Wear suitable protective clothing and gloves.

Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

Environmental exposure controls : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Solid.

Molecular mass : 122.45 g/mol (Labeled)

Color : white.

Odor : No data available

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : 715 °C (1,319 °F) - lit.

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : No data available

Relative vapor density at 20 °C : No data available

Relative density : 2.8 g/cm³ at 25 °C (77 °F)

Solubility : No data available

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Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

hygroscopic.

10.5. Incompatible materials

strong acids.

10.6. Hazardous decomposition products

hydrogen chloride. Rubidium oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

RUBIDIUM-87 CHLORIDE (87Rb) (7791-11-9 (Unlabeled))	
LD50 oral rat	4440 mg/kg
ATE CLP (oral)	4440.000 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Reproductive toxicity - rat - Oral. Effects on Fertility: Female fertility index (e.g.; # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Embryo or Fetus: Fetal death. . Reproductive toxicity - Rat - Oral. Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Newborn: Other postnatal measures or effects.

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : The chemical, physical, and toxicological properties have not been thoroughly investigated.

Symptoms/injuries after inhalation : May be harmful if inhaled. May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May be harmful if absorbed through skin. May cause skin irritation.

Symptoms/injuries after eye contact : May cause eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- | | |
|--------------------------------|--|
| Regional legislation (waste) | : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations. |
| Waste disposal recommendations | : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. |
| Ecology - waste materials | : Dispose of as unused product. |

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

- | | |
|-------------------------------|---|
| Other information | : No supplementary information available. |
| Special transport precautions | : Not dangerous goods. |

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

14.4. Environmental hazards

- | | |
|-------------------|---|
| Other information | : No supplementary information available. |
|-------------------|---|

14.5. Special precautions for user

- | | |
|-------------------------------|------------------------|
| Special transport precautions | : Not dangerous goods. |
|-------------------------------|------------------------|

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

RUBIDIUM-87 CHLORIDE (87Rb) (7791-11-9 (Unlabeled))

Listed on the Canadian DSL (Domestic Substances List) inventory.

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15.2.1. National regulations

No additional information available

15.3. US State regulations

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State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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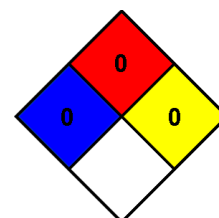
SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product