

# Safety data sheet

according to Regulation (EC) No. 1907/2006



Printing date 27.02.2014

Version number 1

Revision: 27.02.2014

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

### 1.1 Product identifier

**Trade name:** Lutetium(III)-nitrate hydrate ROTI®REMETIC 99,99%**Article number:** 7265**CAS Number:**

100641-16-5

**EC number:**

233-241-7

### Registration number

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, 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

#### Application of the substance / the mixture

Laboratory chemical

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

#### Manufacturer/Supplier:

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

E-Mail: [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)**Further information obtainable from:** Department Health, Safety and Environment

### 1.4 Emergency telephone number:

Poison Centre Munich

Telefon +49/(0)89 19240

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

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

Ox. Sol. 2 H272 May intensify fire; oxidiser.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

#### Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/38: Irritating to eyes and skin.

O; Oxidising

R8: Contact with combustible material may cause fire.

**Additional information:** Note, not yet fully tested.

### 2.2 Label elements

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

The substance is classified and labelled according to the CLP regulation.

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**Hazard pictograms**

GHS03

GHS07

**Signal word** Danger**Hazard statements**

H272 May intensify fire; oxidiser.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

**Precautionary statements**

P220 Keep/Store away from clothing/combustible materials.

P280 Wear protective gloves / eye protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Additional information:**

-

**2.3 Other hazards**

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

## 3 Composition/information on ingredients

**3.1 Chemical characterization: Substances****CAS No. Description**

100641-16-5 Lutetium(III)-nitrat Hydrat

**Identification number(s)****EC number:** 233-241-7**Formula:**  $\text{Lu}(\text{NO}_3)_3 \cdot x\text{H}_2\text{O}$ **Molar mass [g/mol]:** 360,98

## 4 First aid measures

**4.1 Description of first aid measures****General information:**

Remove any clothing soiled by the product.

**After inhalation:**

Supply fresh air; if there is any trouble seek medical help.

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**After skin contact:**

Wash with water and soap.

If skin irritation continues, consult a doctor.

**After eye contact:**

Rinse opened eye for 10 minutes under running water. Then consult a doctor.

**After swallowing:**

Rinse out mouth and drink a glass of water. Do not induce vomiting.

Call for a doctor immediately.

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

We have no description of any toxic symptoms.

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

No further relevant information available.

## 5 Firefighting measures

**5.1 Extinguishing media****Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**In case of fire, the following can be released:

In the event of fire development of hazardous combustion gases or vapours possible.

Carbon monoxide and carbon dioxide

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

## 6 Accidental release measures

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

Ensure adequate ventilation

Avoid formation of dust.

Wear personal protective equipment.

Evacuate the danger area, observe emergency procedures, consult an expert.

**6.2 Environmental precautions**

Do not allow to enter sewers/ground water or penetrate the soil.

**6.3 Methods and material for containment and cleaning up**

Pick up mechanically.

Dispose of the material collected according to regulations.

**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.

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## 7 Handling and storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

### Information about fire - and explosion protection:

Protect from heat.

### 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:

Store away from foodstuffs.

Store away from flammable substances.

#### Further information about storage conditions:

Keep container tightly sealed.

Protect from heat and direct sunlight.

**Recommended storage temperature:** 15 - 25 °C

### 7.3 Specific end use(s)

No further relevant information available.

## 8 Exposure controls/personal protection

### Additional information about design of technical facilities:

No further data; see item 7.

### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:** Not required.

### Additional information:

The lists valid during the making were used as basis.

### 8.2 Exposure controls

#### Personal protective equipment:

#### **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

#### **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### **Respiratory protection:**



Required when dusts are generated.  
Filter P2 (colour code: white)

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**Protection of hands:****Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**Nitrile, thickness:  $\geq 0.11$  mm

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.

**Penetration time of glove material**Value for the permeation: Level  $\geq 6$ 

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

**As protection from splashes gloves made of the following materials are suitable:**Nitrile rubber, thickness:  $\geq 0.11$  mm**Eye protection:**

Tightly sealed goggles

**Body protection:**

Protective work clothing

## 9 Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Solid
<b>Colour:</b>	White
<b>Odour:</b>	Not determined
<b>Odour threshold:</b>	No information available.

<b>pH-value:</b>	No information available.
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**Change in condition**

<b>Melting point/Melting range:</b>	No information available.
<b>Boiling point/Boiling range:</b>	No information available.

<b>Flash point:</b>	No information available
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<b>Flammability (solid, gaseous):</b>	Contact with combustible material may cause fire.
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<b>Ignition temperature:</b>	No information available
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<b>Decomposition temperature:</b>	No information available
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<b>Self-igniting:</b>	No information available
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<b>Danger of explosion:</b>	No information available
<b>Explosion limits:</b>	
<b>Lower:</b>	No information available.
<b>Upper:</b>	No information available.
<b>Oxidizing properties:</b>	May intensify fire; oxidiser.
<b>Vapour pressure:</b>	No information available
<b>Density:</b>	
<b>Relative density</b>	No Information available.
<b>Vapour density</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Solubility in / Miscibility with water:</b>	No information available.
<b>Partition coefficient (n-octanol/water):</b>	No information available
<b>Viscosity:</b>	
<b>Dynamic:</b>	No information available.
<b>Kinematic:</b>	No information available.
<b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

### 10.1 Reactivity

No information available

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions

Strong reaction possible with:

Strong oxidizing agents

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials:

No information available.

### 10.6 Hazardous decomposition products:

In case of fire: see item 5.

## 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

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

Quantitative data on the toxicity of this product are not available.

#### Primary irritant effect:

#### **on the skin:**

Irritant to skin and mucous membranes.

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**on the eye:**

Irritating effect.

**after inhalation:**

Intensive contact with dusts may lead to irritations of the respiratory tract.

**Sensitization:**

Sensitization possible in predisposed persons.

**CMR effects:****Germ cell mutagenicity:**

No information available.

**Carcinogenicity:**

No information available.

**Reproductive toxicity:**

No information available.

**Aspiration hazard:**

No information available.

**Specific target organ toxicity - single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Specific target organ toxicity - repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Additional toxicological information:**

Dyspnoea

coughing

Nausea

Headache

Vomiting

**Further information:**

To the best of our knowledge, the toxicological properties have not been thoroughly investigated. Hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

**12 Ecological information****12.1 Toxicity****Aquatic toxicity:**

Quantitative data on the ecological effect of this product are not 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.

**Ecotoxicological effects:****Remark:**

Do not allow to enter waters, waste water, or soil!

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

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**12.6 Other adverse effects**

No further relevant information available.

**13 Disposal considerations****Waste treatment methods****Recommendation**

This material and its container must be disposed of as hazardous waste.

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

**Uncleaned packaging:****Recommendation:**

Disposal according to official regulations.

**14 Transport information****14.1 UN-Number**

ADR, IMDG, IATA

UN1477

**14.2 UN proper shipping name**

ADR

1477 NITRATES, INORGANIC, N.O.S. (Lutetium(III)-nitrat Hydrat)

IMDG, IATA

NITRATES, INORGANIC, N.O.S. (Lutetium(III)-nitrat Hydrat)

**14.3 Transport hazard class(es)**

ADR, IMDG, IATA

Class  
Label5.1 Oxidising substances.  
5.1**14.4 Packing group**

ADR, IMDG, IATA

II

**14.5 Environmental hazards:**

Marine pollutant:

No

**14.6 Special precautions for user**

Danger code (Kemler):

Warning: Oxidising substances.

EMS Number:

50

F-A,S-Q

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information:**

ADR

Limited quantities (LQ)

1 kg

Transport category

2

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<b>Tunnel restriction code</b>	E
<b>UN "Model Regulation":</b>	UN1477, NITRATES, INORGANIC, N.O.S. (Lutetium(III)-nitrat Hydrat), 5.1, II

### 15 Regulatory information

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

##### National regulations:

**Information about limitation of use:** Employment restrictions concerning juveniles must be observed.

##### Breakdown regulations:

##### Waterhazard class:

Water hazard class 3 (Self-assessment): extremely hazardous for water.

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### 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** Contact with combustible material may cause fire.

**Department issuing MSDS:** Department: Health, Safety and Environment

**Contact:** Herr Heine

##### Abbreviations and acronyms:

ADR: Accord européen sur le transport 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 Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50\*: Lethal Dose, 50 percent (Not relevant for classification)

LD50\*: Lethal Concentration, 50 percent (Not relevant for classification)

Ox. Sol. 2: Oxidising Solids, Hazard Category 2

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2