

According to REACH Regulations (EC) 1907/2006 and (EU) 2020/878

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

### 1.1 Product identifier

Product code : GX7049  
Product name : Ruthenium(III) 2,4-pentanedionate  
CAS number : 14284-93-6  
Physical form : solid, substance  
REACH : A registration number is not available for this substance as the substance or its uses are exempted from 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

PC21: Laboratory chemicals.

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

Company name	: Glenthams Life Sciences Ltd	Telephone	: +44 (0) 1225 667 798
	Unit 5 Leafield Way	Fax	: +44 (0) 2033 978 909
	Corsham SN13 9SW	Email	: <a href="mailto:info@glenthams.com">info@glenthams.com</a>
	United Kingdom	Web	: <a href="http://www.glenthams.com">www.glenthams.com</a>

### 1.4 Emergency telephone number

Emergency telephone : NHS Direct 111 (UK, 24 hours), 112 (EU, 24 Hours), +44 (0) 1225 667 798 (09.00 – 17.00 GMT) number

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification under CLP according to (EC) 1272/2008

H315	Skin Irr. 2
H319	Eye Irr. 2A
H335	STOT SE 3
H336	STOT SE 3

### 2.2 Label elements

Label elements under CLP according to (EC) 1272/2008

#### Pictograms



GHS07

#### Signal words

Warning

#### Hazard statements

H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

#### Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face 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.
P264	Do not breathe fume.

### 2.3 Other hazards

#### PBT

This substance is not identified as a PBT substance.

## 3.0 Composition/information on ingredients

### 3.1 Substances

Name	Identifier	%	Classification
Ruthenium(III) 2,4-pentanedionate	CAS: 14284-93-6 EC: REACH: Not applicable	95.0%	H315, Skin Irr. 2 H319, Eye Irr. 2A H335, STOT SE 3 H336, STOT SE 3

## 4. First aid measures

### 4.1 Description of first aid measures

Skin contact	Wash immediately with plenty of soap and water.
Eye contact	Bathe the eye with running water for 15 minutes.
Ingestion	Wash out mouth with water.
Inhalation	Consult a doctor.

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

Skin contact	There may be mild irritation at the site of contact.
Eye contact	There may be irritation and redness.
Ingestion	There may be irritation of the throat.
Inhalation	There may be irritation of the throat with a feeling of tightness in the chest.
Delayed / immediate effects	Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment

No data available.

## 5. Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media for the surrounding fire should be used.

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

Exposure hazards

In combustion emits toxic fumes.

### 5.3 Advice for fire-fighters

Wear protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus.

## 6. Accidental release measures

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

Personal precautions

Refer to section 8 of SDS for personal protection details.

### 6.2 Environmental precautions

Do not discharge into drains or rivers.

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

Clean-up procedures

Wash the spillage site with large amounts of water.

### 6.4 Reference to other sections

Refer to section 8 of SDS.

## 7. Handling and storage

### 7.1 Precautions for safe handling

#### Handling requirements

Avoid the formation or spread of dust in the air.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Avoid contact with water or humidity. Keep container tightly closed. Store in cool, well ventilated area.

### 7.3 Specific end use(s)

No data available.

## 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Workplace exposure limits

No workplace exposure limit control parameters set

### 8.2 Exposure controls

Engineering measures	No data available.
Respiratory protection	Respiratory protective device with particle filter.
Hand protection	Protective gloves.
Eye protection	Ensure eye bath is to hand. Safety glasses.
Skin protection	Protective clothing.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	Solid
Colour	Red
Odour	No data available.
Melting point/Freezing point	135-145 °C
Boiling point/initial boiling point/boiling range	No data available.
Flammability	No data available.
Lower/Upper explosion limit	No data available.
Flash Point	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water	No data available.
Vapour pressure	No data available.
Density/relative density	No data available.
Relative vapour pressure	No data available.
Particle characteristics	No data available.

### 9.2 Other information

No data available.

## 10. Stability and reactivity

### 10.1 Reactivity

Stable under recommended transport or storage conditions.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

#### Hazardous reactions

Decomposition may occur on exposure to conditions or materials listed below. Hazardous reactions will not occur under normal transport or storage conditions.

#### 10.4 Conditions to avoid

Heat.

#### 10.5 Incompatible materials

**Materials to avoid**

Strong acids. Strong oxidising agents.

### 11. Toxicological information

#### 11.1 Information on toxicological effects

##### a) Acute toxicity

No data available.

##### b) Skin corrosion/irritation

Skin corrosion/irritation (Category 2)

##### c) Serious eye damage/irritation

Serious eye damage/eye irritation (Category 2A)

##### d) Respiratory or skin sensitisation

No data available.

##### e) Germ cell mutagenicity

No data available.

##### f) Carcinogenicity

No data available.

##### g) Reproductive toxicity

No data available.

##### h) STOT-single exposure

Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3)

##### i) STOT-repeated exposure

No data available.

##### j) Aspiration hazard

No data available.

#### 11.2 Symptoms / routes of exposure

Skin contact	There may be mild irritation at the site of contact.
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Eye contact	There may be irritation and redness.
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Ingestion	There may be irritation of the throat.
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Inhalation	There may be irritation of the throat with a feeling of tightness in the chest.
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Delayed / immediate effects	Immediate effects can be expected after short-term exposure.
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Other information	No data available.
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### 12. Ecological information

#### 12.1 Toxicity

No data available.

#### 12.2 Persistence and degradability

Biodegradable.

#### 12.3 Bioaccumulative potential

No bioaccumulation potential.

#### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

This substance is not identified as a PBT substance.

### 12.6 Endocrine disrupting properties

This substance is not identified as having endocrine disrupting properties

### 12.7 Other adverse effects

No data available.

## 13. Disposal considerations

### 13.1 Waste treatment methods

#### Disposal operations

Transfer to a suitable container and arrange for collection by specialised disposal company.

#### NB

The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

## 14. Transport information

This product does not require a classification for transport.

## 15. Regulatory information

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

This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/787.

#### Authorisations/Restrictions

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: No data available.

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: No data available.

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: No data available.

Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021: No data available.

### 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## 16. Other information

### H-Statement Full Texts

H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H336 May cause drowsiness or dizziness

### Abbreviations Full Texts

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road  
ALARP As low as is reasonably practicable  
CAS Chemical Abstracts Service  
CLP Classification, Labelling and Packaging Regulations  
COSHH Control of Substances Hazardous to Health  
EC Number European Community Number

EC50	Effective Concentration 50%
EILINCS	European List of Notified Chemical Substances
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Globally Harmonised System
HSE	Health & Safety Executive UK
IATA	International Air Transport Association
IM	Intramuscular
IMDG	The International Maritime Dangerous Goods Code
IP	Intraperitoneal
IV	Intravascular
LD50	Lethal Dose 50%
LOEC	Lowest Observable Effective Concentration
LTEL	Long Term Exposure Limit
NOEC	No Observable Effective Concentration
OECD	Organisation for Economic Cooperations and Development
PBT	Persistent Bioaccumulative Toxic
PPE	Personal Protective Equipment
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
SC	Subcutaneous
SDS	Safety Data Sheet
STEL	Short Term Exposure Limit
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
WEL	Workplace Exposure Limits

**This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/787.**

Disclaimer: Glentham Life Sciences shall not be held liable for any damage resulting from handling or from contact with the above product. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This document does not guarantee the properties or quality of the product.