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

1.1 Product identifier

Identification of the substance: g-Strophanthin
Article number: 8048
Registration number (REACH): It is not required to list the identified uses because the substance is not subject to registration according to REACH (< 1 t/a)

Index No: 614-025-00-5
EC number: 211-139-3
CAS number: 11018-89-6

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

Identified uses: laboratory chemical, laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment
e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

Emergency telephone number: Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1O</td>
<td>acute toxicity (oral)</td>
<td>(Acute Tox. 3)</td>
<td>H301</td>
</tr>
<tr>
<td>3.1I</td>
<td>acute toxicity (inhal.)</td>
<td>(Acute Tox. 3)</td>
<td>H331</td>
</tr>
<tr>
<td>3.9</td>
<td>specific target organ toxicity - repeated exposure</td>
<td>(STOT RE 2)</td>
<td>H373</td>
</tr>
</tbody>
</table>

2.2 Label elements
Labelling GHS

**Signal word**  
Danger

**Pictograms**

GHS06, GHS08

**Hazard statements**

H301+H331  
Toxic if swallowed or if inhaled

H373  
May cause damage to organs through prolonged or repeated exposure

**Precautionary statements**

**Precautionary statements - prevention**

P260  
Do not breathe dust/fume/gas/mist/vapours/spray.

**Precautionary statements - response**

P301+P310  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P304+P340  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P311  
Call a POISON CENTER or doctor/physician.

P330  
Rinse mouth.

**Precautionary statements - storage**

P403+P233  
Store in a well-ventilated place. Keep container tightly closed.

**Precautionary statements - disposal**

P501  
Dispose of contents/container to industrial combustion plant.

**Labelling of packages where the contents do not exceed 125 ml**

**Signal word:** Danger

**Symbol(s)**

H301+H331  
Toxic if swallowed or if inhaled.

P301+P310  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P304+P340  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P311  
Call a POISON CENTER or doctor/physician.

P330  
Rinse mouth.

P403+P233  
Store in a well-ventilated place. Keep container tightly closed.

P501  
Dispose of contents/container to industrial combustion plant.

**2.3 Other hazards**

There is no additional information.
g-Strophanthin ≥98 %

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance: g-Strophanthin
Index No: 614-025-00-5
EC number: 211-139-3
CAS number: 11018-89-6
Molecular formula: C29 H44 O12 * 8H2O
Molar mass: 728.8 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Self-protection of the first aider.

Following inhalation
Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration.

Following skin contact
Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact
Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion
Rinse mouth immediately and drink plenty of water. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

After eye contact: Causes slight to moderate irritation,
Following skin contact: Localised redness, oedema, pruritis and/or pain,
After ingestion: Nausea,
Following inhalation: Cough, pain, choking, and breathing difficulties

4.3 Indication of any immediate medical attention and special treatment needed
none
SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Combustible.

Hazardous combustion products
In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters
Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoid contact with skin, eyes and clothes.

6.2 Environmental precautions
Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up
Advices on how to contain a spill
Covering of drains.

Advices on how to clean up a spill
Take up mechanically. Control of dust.

Other information relating to spills and releases
Place in appropriate containers for disposal.

6.4 Reference to other sections
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Use extractor hood (laboratory). Clear contaminated areas thoroughly.

Advice on general occupational hygiene
When using do not eat or drink. Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities
Store in a dry place.

Incompatible substances or mixtures
Observe hints for combined storage.

Consideration of other advice
Store locked up.

• Ventilation requirements
Use local and general ventilation.

• Specific designs for storage rooms or vessels
Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)
No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
National limit values

Occupational exposure limit values (Workplace Exposure Limits)
Data are not available.

8.2 Exposure controls
Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection.

Skin protection

• hand protection
Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• type of material
NBR (Nitrile rubber)
**Safety data sheet**
Safe Work Australia - Code of Practice

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- **material thickness**
  >0,11 mm

- **breakthrough times of the glove material**
  >480 minutes (permeation: level 6)

- **other protection measures**
  Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

**Respiratory protection**

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P3 (filters at least 99,95 % of airborne particles, colour code: White).

**Environmental exposure controls**

Keep away from drains, surface and ground water.

### SECTION 9: Physical and chemical properties

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

**Appearance**

- **Physical state**: solid (powder, crystalline)
- **Colour**: white - cream
- **Odour**: odourless
- **Odour threshold**: No data available

**Other physical and chemical parameters**

- **pH (value)**: This information is not available.
- **Melting point/freezing point**: 200 °C
- **Initial boiling point and boiling range**: This information is not available.
- **Flash point**: not applicable
- **Evaporation rate**: no data available
- **Flammability (solid, gas)**: These information are not available
- **Explosive limits**
  - **lower explosion limit (LEL)**: this information is not available
  - **upper explosion limit (UEL)**: this information is not available
- **Explosion limits of dust clouds**: these information are not available
- **Vapour pressure**: This information is not available.
- **Density**: This information is not available.
- **Vapour density**: This information is not available.
- **Relative density**: Information on this property is not available.
### SECTION 10: Stability and reactivity

#### 10.1 Reactivity
The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

#### 10.2 Chemical stability
Sensitivity to light (photosentive).

#### 10.3 Possibility of hazardous reactions
Violent reaction with: Strong oxidiser, Strong alkali, Strong acid

#### 10.4 Conditions to avoid
There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials
There is no additional information.

#### 10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

- **Skin corrosion/irritation**
  Shall not be classified as corrosive/irritant to skin.

- **Serious eye damage/eye irritation**
  Shall not be classified as seriously damaging to the eye or eye irritant.

- **Respiratory or skin sensitisation**
  Shall not be classified as a respiratory or skin sensitiser.

- **Summary of evaluation of the CMR properties**
  Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

- **Specific target organ toxicity - single exposure**
  Shall not be classified as a specific target organ toxicant (single exposure).
Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics
• If swallowed
toxic if swallowed, in contact with skin or if inhaled
• If in eyes
Irritating to eyes
• If inhaled
cough, Inhalation of dust may cause irritation of the respiratory system, toxic if inhaled
• If on skin
data are not available

Other information
None

SECTION 12: Ecological information

12.1 Toxicity
acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability
Theoretical Oxygen Demand: 1.493 \( mg/mg \)
Theoretical Carbon Dioxide: 1.751 \( mg/mg \)

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.
n-octanol/water (log KOW) \(-2\)

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 Other adverse effects
Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
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g-Strophanthin ≥98 %
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Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers/packagings
It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

Sewage disposal-relevant information
Do not empty into drains.

Waste treatment of containers/packagings
It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks
Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number
1544

14.2 UN proper shipping name
ALKALOIDS, SOLID, N.O.S.
Hazardous ingredients
g-Strophanthin

14.3 Transport hazard class(es)
Class
6.1 (toxic substances)

14.4 Packing group
III (substance presenting low danger)

14.5 Environmental hazards
none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user
Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations
• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
UN number
1544
Proper shipping name
ALKALOIDS, SOLID, N.O.S.
Particulars in the transport document
UN1544, ALKALOIDS, SOLID, N.O.S., (g-Strophanthin), 6.1, III, (E)
Class
6.1
Classification code
T2
Packing group
III
Danger label(s)
6.1
g-Strophanthin ≥98 %

article number: 8048

- **Special provisions (SP)**
  - 43, 274, 802 (ADN)

- **Excepted quantities (EQ)**
  - E1

- **Limited quantities (LQ)**
  - 5 kg

- **Transport category (TC)**
  - 2

- **Tunnel restriction code (TRC)**
  - E

- **Hazard identification No**
  - 60

- **Emergency Action Code**
  - 2X

- **International Maritime Dangerous Goods Code (IMDG)**
  - **UN number**
    - 1544
  - **Proper shipping name**
    - ALKALOIDS, SOLID, N.O.S.
  - **Particulars in the shipper’s declaration**
    - UN1544, ALKALOIDS, SOLID, N.O.S., (g-Strophanthin), 6.1, III
  - **Class**
    - 6.1
  - **Packing group**
    - III
  - **Danger label(s)**
    - 6.1

- **International Civil Aviation Organization (ICAO-IATA/DGR)**
  - **UN number**
    - 1544
  - **Proper shipping name**
    - Alkaloid salts, solid, n.o.s.
  - **Particulars in the shipper’s declaration**
    - UN1544, Alkaloid salts, solid, n.o.s., (g-Strophanthin), 6.1, III
  - **Class**
    - 6.1
  - **Packing group**
    - III
  - **Danger label(s)**
    - 6.1
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g-Strophanthin ≥98 %

article number: 8048

Special provisions (SP)  A3, A5, A6
Excepted quantities (EQ)  E1
Limited quantities (LQ)  10 kg

SECTION 15: Regulatory information

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

National inventories
Substance is listed in the following national inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>NZ</td>
<td>NZIoC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TW</td>
<td>TCSI</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

Legend
ECSI  EC Substance Inventory (EINECS, ELINCS, NLP)
NZIoC New Zealand Inventory of Chemicals
TCSI  Taiwan Chemical Substance Inventory

15.2 Chemical Safety Assessment
No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>GHS</td>
<td>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>Index No</td>
<td>the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
</tbody>
</table>
### Key literature references and sources for data
- UN Recommendations on the Transport of Dangerous Good
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>toxic if swallowed</td>
</tr>
<tr>
<td>H331</td>
<td>toxic if inhaled</td>
</tr>
<tr>
<td>H373</td>
<td>may cause damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.