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

1.4 Emergency telephone number

Emergency information service: Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>3.1O</td>
</tr>
<tr>
<td>3.1I</td>
</tr>
<tr>
<td>3.9</td>
</tr>
</tbody>
</table>

2.2 Label elements
Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

g-Strophanthin \( \geq 98 \% \)
article number: 8048

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

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pictograms</td>
<td>GHS06, GHS08</td>
</tr>
</tbody>
</table>

**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/doctor.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311    Call a POISON CENTER/doctor.
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/doctor.
P304+P340  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311      Call a POISON CENTER/doctor.
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.
SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>g-Strophanthin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>614-025-00-5</td>
</tr>
<tr>
<td>EC number</td>
<td>211-139-3</td>
</tr>
<tr>
<td>CAS number</td>
<td>11018-89-6</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C29 H44 O12 * 8H2O</td>
</tr>
<tr>
<td>Molar mass</td>
<td>728,8 g/mol</td>
</tr>
</tbody>
</table>

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)
• 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.
**Solubility(ies)**

Water solubility: no data available

**Partition coefficient**

n-octanol/water (log KOW): -2

**Auto-ignition temperature**

Information on this property is not available.

**Decomposition temperature**

no data available

**Viscosity**

not relevant (solid matter)

**Explosive properties**

Shall not be classified as explosive

**Oxidising properties**

none

### 9.2 Other information

There is no additional information.

---

**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).
Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

g-Strophanthin ≥98 %
article number: 8048

• 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.
### Section 14: Transport Information

#### 14.1 UN number

**1544**

#### 14.2 UN proper shipping name

**ALKALOIDS, SOLID, N.O.S.**

#### 14.3 Hazardous ingredients

- **g-Strophanthin**

#### 14.4 Transport hazard class(es)

- **Class 6.1 (toxic substances)**

#### 14.5 Packing group

- **III (substance presenting low danger)**

#### 14.6 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)**
  
<table>
<thead>
<tr>
<th>UN number</th>
<th>1544</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>ALKALOIDS, SOLID, N.O.S.</td>
</tr>
<tr>
<td>Particulars in the transport document</td>
<td>UN1544, ALKALOIDS, SOLID, N.O.S., (g-Strophanthin), 6.1, III, (E)</td>
</tr>
<tr>
<td>Class</td>
<td>6.1</td>
</tr>
<tr>
<td>Classification code</td>
<td>T2</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Danger label(s)</td>
<td>6.1</td>
</tr>
</tbody>
</table>
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

• 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
Marine pollutant -
Packing group III
Danger label(s) 6.1

Special provisions (SP) 43, 223, 274
Excepted quantities (EQ) E1
Limited quantities (LQ) 5 kg
EmS F-A, S-A
Stowage category A

• 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

Special provisions (SP) A3, A5, A6
g-Strophanthin ≥98 %

article number: 8048

<table>
<thead>
<tr>
<th>Exempted quantities (EQ)</th>
<th>E1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
<td>10 kg</td>
</tr>
</tbody>
</table>

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)
  Not listed.

- Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)
  Not listed.

- Regulation 850/2004/EC on persistent organic pollutants (POP)
  Not listed.

- Restrictions according to REACH, Annex XVII
  not listed

- Restrictions according to REACH, Title VIII
  None.

- List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list
  not listed

- Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>H2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>41)</td>
</tr>
<tr>
<td>- Category 2, all exposure routes</td>
</tr>
<tr>
<td>- category 3, inhalation exposure route</td>
</tr>
</tbody>
</table>

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II
not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)
not listed

Regulation 98/2013/EU on the marketing and use of explosives precursors
not listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors
not listed
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>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</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>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>SVHC</td>
<td>Substance of Very High Concern</td>
</tr>
</tbody>
</table>
Abbr. | Descriptions of used abbreviations
---|---
vPvB | very Persistent and very Bioaccumulative

Key literature references and sources for data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- 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.