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

1.1 Product identifiers
Product name: Ouabain octahydrate

Product Number: O3125
Brand: Sigma
Index-No.: 614-025-00-5
REACH No.: 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.
CAS-No.: 11018-89-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Company: Sigma-Aldrich Chemie BV
Stationsplein 4
3331 LL ZWIJNDRECHT
NETHERLANDS

Telephone: +31 78-620-5411
Fax: +31 78-620-5421
E-mail address: eurtechserv@sial.com

1.4 Emergency telephone number
Emergency Phone #: 112

SEGMENT 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Specific target organ toxicity - repeated exposure (Category 2), H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
R33
T Toxic R23/25

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger
Hazard statement(s)
H301 + H331 Toxic if swallowed or if inhaled
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)
P261 Avoid breathing dust.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P311 Call a POISON CENTER or doctor/physician.

Supplemental Hazard Statements none

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms: Acocantherine
G-Strophanthine
1β,3β,5β,11α,14,19-Hexahydroxycard-20(22)-enolide 3-(6-deoxy-α-L-mannopyranoside)

Formula: C_{29}H_{44}O_{12} \cdot 8H_2O
Molecular Weight: 728.77 g/mol
CAS-No.: 11018-89-6
EC-No.: 211-139-3
Index-No.: 614-025-00-5

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ouabain octahydrate</td>
<td>Acute Tox. 3; STOT RE 2; H301 + H331, H373</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>11018-89-6</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>211-139-3</td>
<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>614-025-00-5</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ouabain octahydrate</td>
<td>T, R23/25 - R33</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>11018-89-6</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Index-No.</td>
<td>614-025-00-5</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.
If swallowed
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
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data 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
Carbon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
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
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Light sensitive.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.
SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
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

a) Appearance Form: powder
b) Odour: no data available

c) Odour Threshold: no data available

d) pH: no data available

e) Melting point/freezing point: Melting point/range: 260 °C

f) Initial boiling point and boiling range: no data available

g) Flash point: no data available

h) Evaporation rate: no data available

i) Flammability (solid, gas): no data available

j) Upper/lower flammability or explosive limits: no data available

k) Vapour pressure: no data available

l) Vapour density: no data available

m) Relative density: no data available

n) Water solubility: 10 g/l - soluble

o) Partition coefficient: n-octanol/water: no data available

p) Auto-ignition temperature: no data available

q) Decomposition temperature: no data available

r) Viscosity: no data available

s) Explosive properties: no data available

t) Oxidizing properties: no data available

9.2 Other safety information

Solubility in other solvents: Ethanol 10 g/l

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SECTION 10: Stability and reactivity

10.1 Reactivity: no data available

10.2 Chemical stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions: no data available

10.4 Conditions to avoid: Light.

10.5 Incompatible materials: Strong oxidizing agents, Strong acids, Strong bases

10.6 Hazardous decomposition products: Other decomposition products - no data available

In the event of fire: see section 5
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - mouse - 5 mg/kg
Inhalation: no data available
LD50 Intraperitoneal - mouse - 1,213 mg/kg
Remarks: Cardiac: Arrhythmias (including changes it conduction).

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitisation
no data available

Germ cell mutagenicity

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Additional Information
RTECS: Not available

SECTION 12: Ecological information

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1544  
IMDG: 1544  
IATA: 1544

14.2 UN proper shipping name
ADR/RID: ALKALOIDS, SOLID, N.O.S. (Ouabain octahydrate)  
IMDG: ALKALOIDS, SOLID, N.O.S. (Ouabain octahydrate)  
IATA: Alkaloids, solid, n.o.s. (Ouabain octahydrate)

14.3 Transport hazard class(es)
ADR/RID: 6.1  
IMDG: 6.1  
IATA: 6.1

14.4 Packaging group
ADR/RID: I  
IMDG: I  
IATA: I

14.5 Environmental hazards
ADR/RID: no  
IMDG Marine pollutant: no  
IATA: no

14.6 Special precautions for user
no data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
Acute Tox.  Acute toxicity
H301  Toxic if swallowed.
H301 + H331 Toxic if swallowed or if inhaled
H331  Toxic if inhaled.
H373  May cause damage to organs through prolonged or repeated exposure.
STOT RE  Specific target organ toxicity - repeated exposure

Full text of R-phrases referred to under sections 2 and 3
T  Toxic
R23/25  Toxic by inhalation and if swallowed.
R33  Danger of cumulative effects.

Further information
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