1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifiers

Product name: 3-(α-Acetonylbenzyl)-4-hydroxycoumarin sodium salt

CAS-No.: 129-06-6

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

Identified uses: Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 2)
Reproductive toxicity (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Very toxic if swallowed. May cause harm to the unborn child.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word: Danger

Hazard statement(s)

H300 Fatal if swallowed.
H360 May damage fertility or the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.
P264 Wash hands thoroughly after handling.
P301 + P310 If SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P308 + P313 If exposed or concerned: Get medical advice/attention.

Supplemental Hazard Statements

none

Restricted to professional users.


Hazard symbol(s)

R-phrase(s)

R61 May cause harm to the unborn child.
R28 Also very toxic if swallowed.

S-phrase(s)

S53 Avoid exposure - obtain special instructions before use.
S28 After contact with skin, wash immediately with plenty of water.
S36/37 Wear suitable protective clothing and gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Restricted to professional users.

2.3 Other hazards - none
3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Synonyms</th>
<th>Formula</th>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warfarin sodium</td>
<td>4-Hydroxy-3-(3-oxo-1-phenylbutyl)coumarin</td>
<td>C19H15NaO4</td>
<td>&gt;= 92 - &lt;= 96 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>129-06-6</td>
<td>204-929-4</td>
</tr>
</tbody>
</table>

2-Propanol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-63-0</td>
<td>200-661-7</td>
</tr>
</tbody>
</table>

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
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed
no data available

5. FIRE-FIGHTING 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, Sodium oxides

5.3 Precautions for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

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

7.3 Specific end uses
No data available

8. EXPOSURE CONTROLS/PERSOANL 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.

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).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Appearance</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>Odour</td>
</tr>
<tr>
<td>c)</td>
<td>Odour Threshold</td>
</tr>
<tr>
<td>d)</td>
<td>pH</td>
</tr>
<tr>
<td>e)</td>
<td>Melting/freezing point</td>
</tr>
<tr>
<td>f)</td>
<td>Initial boiling point and boiling range</td>
</tr>
<tr>
<td>g)</td>
<td>Flash point</td>
</tr>
</tbody>
</table>
9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong bases, Acid chlorides, Acid anhydrides

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Skin corrosion/irritation

no data available

no data available (Warfarin sodium)

Serious eye damage/eye irritation

no data available

no data available (Warfarin sodium)

Respiratory or skin sensitization

no data available

no data available (Warfarin sodium)

Germ cell mutagenicity

no data available

no data available (Warfarin sodium)

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.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)

Reproductive toxicity
May cause congenital malformation in the fetus. (Warfarin sodium)
Presumed human reproductive toxicant (Warfarin sodium)
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>May be harmful if inhaled. May cause respiratory tract irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>May be fatal if swallowed.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. May cause skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>May cause eye irritation.</td>
</tr>
</tbody>
</table>

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - > 16 mg/l - 96 h (Warfarin sodium)

Toxicity to daphnia and other aquatic invertebrates.
EC50 - Daphnia magna (Water flea) - > 17 mg/l - 48 h (Warfarin sodium)

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
no data available

12.6 Other adverse effects
Harmful to aquatic life.
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. 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.

14. TRANSPORT INFORMATION

14.1 UN-Number
14.2 UN proper shipping name
ADR/RID: ALKAHOID SALTS, SOLID, N.O.S.
IMDG: ALKAHOID SALTS, SOLID, N.O.S.
IATA: Alkaloid salts, solid, n.o.s.

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

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

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

14.6 Special precautions for users
no data available

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
no data available

16. OTHER INFORMATION
Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.