1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Acetarsone
Product Number : A0259
Brand : Sigma
Product Use : For laboratory research purposes.
Supplier : Sigma-Aldrich Canada Co.
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA
Manufacturer : Sigma-Aldrich Corporation
3050 Spruce St.
St. Louis, Missouri 63103
USA
Telephone : +1 9058299500
Fax : +1 9058299292
Emergency Phone # (For both supplier and manufacturer) : +1-703-527-3887 (CHEMTREC)
Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

WHMIS Classification
D1A Very Toxic Material Causing Immediate and Serious Toxic Effects
D1B Toxic Material Causing Immediate and Serious Toxic Effects
D2A Very Toxic Material Causing Other Toxic Effects

GHS Classification
Acute toxicity, Oral (Category 1)
Acute toxicity, Inhalation (Category 3)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram
Signal word Danger
Hazard statement(s)
H300 Fatal if swallowed.
H331 Toxic if inhaled.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Collect spillage.

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

Store locked up.

Dispose of contents/container to an approved waste disposal plant.

HMIS Classification
- Health hazard: 4
- Chronic Health Hazard: *
- Flammability: 0
- Physical hazards: 0

Potential Health Effects
- Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Eyes: May cause eye irritation.
- Ingestion: May be fatal if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: N-Acetyl-4-hydroxy-m-arsanilic acid

Formula: \( C_8H_{10}AsNO_5 \)

Molecular weight: 275.09 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-44-9</td>
<td>202-582-3</td>
<td>033-002-00-5</td>
<td>&lt;=100%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Arsenic oxides

Explosion data - sensitivity to mechanical impact
No data available
Explosion data - sensitivity to static discharge
No data available

6. ACCIDENTAL RELEASE MEASURES

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

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.

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.

7. HANDLING AND STORAGE

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.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.
Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetarsone</td>
<td>97-44-9</td>
<td>TWA</td>
<td>0.010000 mg/m³</td>
<td>Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)</td>
</tr>
</tbody>
</table>

Remarks
Confirmed Human Carcinogen (means that the agent is carcinogenic to humans)

<table>
<thead>
<tr>
<th>TWA</th>
<th>0.010000 mg/m³</th>
<th>Canada. British Columbia OEL</th>
</tr>
</thead>
</table>

ACGIH "A1" applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies

<table>
<thead>
<tr>
<th>TWA</th>
<th>0.010000 mg/m³</th>
<th>Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.</th>
</tr>
</thead>
</table>

Denotes a chemical agent listed in Table 1 of Ontario Regulation 490/09 (Designated Substances) made under the Act. See clause 2 (2) (a) of this Regulation.

<table>
<thead>
<tr>
<th>STEL</th>
<th>0.050000 mg/m³</th>
<th>Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.</th>
</tr>
</thead>
</table>

Denotes a chemical agent listed in Table 1 of Ontario Regulation 490/09 (Designated Substances) made under the Act. See clause 2 (2) (a) of this Regulation.

<table>
<thead>
<tr>
<th>TWA</th>
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</table>

Confirmed Human Carcinogen (means that the agent is carcinogenic to humans)

<table>
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<th>TWA</th>
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</tr>
</thead>
</table>

IARC ‘1’ applies to substances categorized as carcinogenic to humans, and used when there is
sufficient evidence of carcinogenicity in humans.

ACGIH 'A1' applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies

<table>
<thead>
<tr>
<th></th>
<th>TWA</th>
<th>Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>Denotes a chemical agent listed in Table 1 of Ontario Regulation 490/09 (Designated Substances) made under the Act. See clause 2 (2) (a) of this Regulation.</td>
</tr>
<tr>
<td></td>
<td>STEL 0.05 mg/m³</td>
<td>Denotes a chemical agent listed in Table 1 of Ontario Regulation 490/09 (Designated Substances) made under the Act. See clause 2 (2) (a) of this Regulation.</td>
</tr>
</tbody>
</table>

### Personal protective equipment

**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).

**Hand 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.

- **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.

**Eye 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 and 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.

**Hygiene measures**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**Specific engineering controls**
Use mechanical exhaust or laboratory fumehood to avoid exposure.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: powder
Colour: white

### Safety data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Melting point/range: 225 - 227 °C (437 - 441 °F)</td>
</tr>
<tr>
<td>Boiling point</td>
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</tr>
<tr>
<td>Flash point</td>
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</tr>
<tr>
<td>Ignition temperature</td>
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</tr>
<tr>
<td>Auto-ignition temperature</td>
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</tr>
<tr>
<td>Lower explosion limit</td>
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</tr>
<tr>
<td>Upper explosion limit</td>
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<tr>
<td>Vapour pressure</td>
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</tr>
<tr>
<td>Density</td>
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<td>Water solubility</td>
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<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
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</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
No data available

**Conditions to avoid**
No data available

**Materials to avoid**
Strong oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Arsenic oxides
Other decomposition products - No data available

### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**
LD50 Oral - Mouse - 4 mg/kg

**Inhalation LC50**

**Dermal LD50**
No data available

**Other information on acute toxicity**
LDLO Intravaginal - Human - female - 155 mg/kg
Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

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
No data available

Teratogenicity
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available

Potential health effects

- Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
- Ingestion: May be fatal if swallowed.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Eyes: May cause eye irritation.

Synergistic effects
No data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

- Toxicity
  No data available

- Persistence and degradability
  No data available

- Bioaccumulative potential
  No data available

- Mobility in soil
  No data available

- PBT and vPvB assessment
  No data available
Other adverse effects
Very toxic to aquatic life with long lasting effects.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

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

DOT (US)
UN number: 3465  Class: 6.1  Packing group: II
Proper shipping name: Organoarsenic compound, solid, n.o.s. (Acetarsone)
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3465  Class: 6.1  Packing group: II  EMS-No: F-A, S-A
Proper shipping name: ORGANOARSENIC COMPOUND, SOLID, N.O.S. (Acetarsone)
Marine pollutant: Marine pollutant

IATA
UN number: 3465  Class: 6.1  Packing group: II
Proper shipping name: Organoarsenic compound, solid, n.o.s. (Acetarsone)

15. REGULATORY INFORMATION

WHMIS Classification
D1A  Very Toxic Material Causing Immediate and Serious Toxic Effects  Highly toxic by ingestion
D1B  Toxic Material Causing Immediate and Serious Toxic Effects  Toxic by inhalation.
D2A  Very Toxic Material Causing Other Toxic Effects  Carcinogen

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Further information
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