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

1.1 Product identifiers

Product name: Chorismic acid barium salt, from Enterobacter aerogenes

Product Number: C1259
Brand: Sigma
CAS-No.: 55508-12-8

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

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

2.2 Label elements

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

Signal word: Warning
Hazard statement(s)
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements
none

Safety data sheet available on request.


R-phrase(s)
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.

S-phrase(s)
S22 Do not breathe dust.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36 Wear suitable protective clothing.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms: trans-3-[(1-Carboxyethenyl]oxy)-4-hydroxy-1,5-cyclohexadiene-1-carboxylic acid

Formula: C₁₀H₈BaO₆
Molecular Weight: 361.49 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chorismic acid barium</td>
<td></td>
</tr>
<tr>
<td>CAS-No. 55508-12-8</td>
<td>-</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. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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
Central nervous system depression, Nausea, Headache, Vomiting, narcosis, Damage to the heart.

4.3 Indication of any immediate medical attention and special treatment needed
no data available
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, Barium oxide

5.3 **Advice for firefighters**

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**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 **Environmental precautions**

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.

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.

7.2 **Conditions for safe storage, including any incompatibilities**

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

Recommended storage temperature: -70 °C

7.3 **Specific end uses**

no data available

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Control parameters**

Components with workplace control parameters

8.2 **Exposure controls**

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**
Safety glasses with side-shields conforming to EN166 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**
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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

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<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Form: solid</td>
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<tr>
<td>Odour</td>
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<td>Odour Threshold</td>
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</tr>
<tr>
<td>pH</td>
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</tr>
<tr>
<td>Melting point/freezing point</td>
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</tr>
<tr>
<td>Initial boiling point and boiling range</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Evaporation rate</td>
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<tr>
<td>Flammability (solid, gas)</td>
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<tr>
<td>Upper/lower flammability or explosive limits</td>
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</tr>
<tr>
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<td>Partition coefficient: n-octanol/water</td>
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<tr>
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<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Viscosity</td>
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</tr>
<tr>
<td>Explosive properties</td>
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</tr>
<tr>
<td>Oxidizing properties</td>
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</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**
no data available

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

11. **TOXICOLOGICAL INFORMATION**

11.1 **Information on toxicological effects**

- **Acute toxicity**
  no data available

- **Skin corrosion/irritation**
  no data available

- **Serious eye damage/eye irritation**
  no data available

- **Respiratory or skin sensitization**
  no data available

- **Germ cell mutagenicity**
  no data available

- **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**
  no data available

- **Specific target organ toxicity - single exposure**
  Inhalation - May cause respiratory irritation.

- **Specific target organ toxicity - repeated exposure**
  no data available

- **Aspiration hazard**
  no data available

- **Potential health effects**
  - **Inhalation**
    Harmful if inhaled. Causes respiratory tract irritation.
  - **Ingestion**
    Harmful if swallowed.
  - **Skin**
    Harmful if absorbed through skin. Causes skin irritation.
  - **Eyes**
    Causes serious eye irritation.

- **Signs and Symptoms of Exposure**
  Central nervous system depression, Nausea, Headache, Vomiting, narcosis, Damage to the heart.

- **Additional Information**
  RTECS: Not available

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
   no data available

12.6 Other adverse effects
   no data available

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.

14. TRANSPORT INFORMATION

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

14.2 UN proper shipping name
   ADR/RID: Not dangerous goods
   IMDG: Not dangerous goods
   IATA: Not dangerous goods

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

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

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

14.6 Special precautions for user
   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
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