1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers
Product name: Cefamandole sodium salt
Product Number: C7145
Brand: Sigma
CAS-No.: 30034-03-8

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
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052

1.4 Emergency telephone number
Emergency Phone #: (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Respiratory sensitisation (Category 1), H334
Skin sensitisation (Category 1), H317
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger
Hazard statement(s)
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
H319  Causes serious eye irritation.
H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335  May cause respiratory irritation.

Precautionary statement(s)
P261  Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264  Wash skin thoroughly after handling.
P271  Use only outdoors or in a well-ventilated area.
P272  Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P362 Take off contaminated clothing and wash before reuse.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS:

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Formula</th>
<th>C\textsubscript{18}H\textsubscript{17}N\textsubscript{6}NaO\textsubscript{5}S\textsubscript{2}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>484.48 g/mol</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>30034-03-8</td>
</tr>
<tr>
<td>EC-No.</td>
<td>250-009-0</td>
</tr>
</tbody>
</table>

Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium [6r-[6α,7(r*)]]-7-[(hydroxyphenylacetyl)amino]-3-[[1-methyl-1H-tetr azol-5-yl]thio]methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]</td>
<td>Skin Irrit. 2; Eye Irrit. 2A; Resp. Sens. 1; Skin Sens. 1; STOT SE 3; H315, H317, H319, H334, H335</td>
</tr>
</tbody>
</table>

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

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. 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. 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
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
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, nitrogen oxides (NOx), Sulphur oxides, Sodium oxides

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 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

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.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

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
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.
**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).

**Control of environmental exposure**
Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance
  - Form: solid
- b) Odour
  - no data available
- c) Odour Threshold
  - no data available
- d) pH
  - no data available
- e) Melting point/freezing point
  - no data available
- 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
  - no data available
- 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
- no data available

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**
no data available

10.5 **Incompatible materials**
Alkali metals

10.6 **Hazardous decomposition products**
Other decomposition products - no data available
In the event of fire: see section 5

11. **TOXICOLOGICAL INFORMATION**

11.1 **Information on toxicological effects**

**Acute toxicity**

LD50 Oral - rat - > 16,600 mg/kg

Inhalation: no data available

Dermal: no data available

**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**

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

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

**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  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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. 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)  
Not dangerous goods

IMDG  
Not dangerous goods

IATA  
Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components  
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components  
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards  
Acute Health Hazard

Massachusetts Right To Know Components  
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
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New Jersey Right To Know Components

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<td>30034-03-8</td>
<td></td>
</tr>
</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit.   Eye irritation
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
H319  Causes serious eye irritation.
H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335  May cause respiratory irritation.
Resp. Sens.  Respiratory sensitisation
Skin Irrit.  Skin irritation
Skin Sens.  Skin sensitisation

HMIS Rating
Health hazard:   2
Chronic Health Hazard:   *
Flammability:  0
Physical Hazard  0

NFPA Rating
Health hazard:   2
Fire Hazard:   0
Reactivity Hazard:  0

Further information
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Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.3   Revision Date: 06/29/2014   Print Date: 06/30/2016