

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 20.03.2015

Revision: 20.03.2015

### SECTION 1: Identification of the substance/mixture and of the company/ undertaking

- **1.1 Product identifier**
- **Trade name:**  
Cycloheximide
- **Synonyms:** Actidione, Naramycin A, 3-[2-(3,5-Dimethyl-2-oxocyclohexyl)-2-hydroxyethyl]glutarimide
- **Article number:** ALX-380-269
- **CAS Number:**  
66-81-9
- **EC number:**  
200-636-0
- **Index number:**  
613-140-00-8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation:** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Enzo Life Sciences, Inc.  
10 Executive Boulevard  
Farmingdale, NY 11735  
U.S.A.  
msds@enzolifesciences.com
- **Further information obtainable from:**  
Customer service  
During normal business hours.  
U.S. +800-942-0430  
International +41 61 926 8989
- **1.4 Emergency telephone number:**  
U.S. +1 800-255-3924  
International +01-813-248-0585

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 2      H300      Fatal if swallowed.



GHS08 health hazard

Muta. 2              H341      Suspected of causing genetic defects.  
Repr. 1B             H360D      May damage the unborn child.

GHS09 environment

Aquatic Chronic 2   H411      Toxic to aquatic life with long lasting effects.

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- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC:**



T+; Very toxic

R28: Very toxic if swallowed.



T; Toxic

Repr. Cat. 2

R61: May cause harm to the unborn child.



Xn; Harmful

R40-68: Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Muta. Cat. 3

- **Information concerning particular hazards for human and environment:** Not applicable.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the CLP regulation.

- **Hazard pictograms:**



GHS06 GHS08 GHS09

- **Signal word:** Danger

- **Hazard statements:**

H300 Fatal if swallowed.

H341 Suspected of causing genetic defects.

H360D May damage the unborn child.

H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P281 Use personal protective equipment as required.

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**

- **CAS No. Description:**

66-81-9 Cycloheximide

- **Identification number(s):**

- **EC number:** 200-636-0

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### SECTION 4: First aid measures

#### · **4.1 Description of first aid measures**

##### · **General information:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

In case of accident, seek medical advice immediately and show the label and the MSDS where possible.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

##### · **After skin contact:**

Seek medical attention if symptoms appear.

Immediately wash with water and soap and rinse thoroughly.

Remove contaminated clothing.

##### · **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After ingestion:** Do not induce vomiting; call for medical help immediately.

#### · **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

#### · **4.3 Indication of any immediate medical attention and special treatment needed**

In case of accident, seek medical advice immediately and show the label and the MSDS where possible.

### SECTION 5: Firefighting measures

#### · **5.1 Extinguishing media**

##### · **Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### · **5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

#### · **5.3 Advice for firefighters**

##### · **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

### SECTION 6: Accidental release measures

#### · **6.1 Personal precautions, protective equipment and emergency procedures:**

Avoid formation of dust.

Wear protective clothing.

#### · **6.2 Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

#### · **6.3 Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

#### · **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**

Thorough dedusting.  
Open and handle receptacle with care.

- **Information about fire - and explosion protection:** Keep respiratory protective device available.

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

Store tightly sealed in a cool, dry and well ventilated location (see label for storage temperature and additional specific information).

Keep away from heat, sources of ignition and incompatibles such as oxidizing agents.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Store tightly sealed in a cool, dry and well ventilated location (see label for storage temperature and additional specific information).

- **Information about storage in one common storage facility:**

Do not store in warm environment or in contact with flammable or oxidizing substances.

- **Further information about storage conditions:**

Store under lock and key and with access restricted to technical experts or their assistants only.

- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:** Not required.

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

- **Respiratory protection:** Not required.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses

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### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

Form: Powder  
 Colour: White to yellow

· Odour: Characteristic

· Odour threshold: Not determined.

· pH-value: Not applicable.

##### · Change in condition

Melting point/Melting range: 116 °C (Z)

Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Product is not flammable.

##### · Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

##### · Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with water at 25 °C: 21 g/l

· Partition coefficient (n-octanol/water): Not determined.

##### · Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· 9.2 Other information: No further relevant information available.

### SECTION 10: Stability and reactivity

#### · 10.1 Reactivity

· 10.2 Chemical stability: Stable. Avoid strong oxidizing agents.

#### · Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No dangerous reactions known.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

Oral	LD50 - Oral	65 mg/kg (dog)
		65 mg/kg (guinea pig)
		60 mg/kg (monkey)
		133 mg/kg (mouse)
		2 mg/kg (rat)
LD50 - Intraperitoneal	4 mg/kg (cat)	
	60 mg/kg (guinea pig)	
	100 mg/kg (mouse)	
LD50 - Intravenous	3,7 mg/kg (rat)	
	1 mg/kg (dog)	
	17 mg/kg (rabbit)	

- **Primary irritant effect:**

- **on the skin:** Not determined

- **on the eye:** Not determined

- **Sensitisation:** No sensitising effects known.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Muta. 2, Repr. 1B

### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **12.2 Persistence and degradability:** No further relevant information available.

- **12.3 Bioaccumulative potential:** No further relevant information available.

- **12.4 Mobility in soil:** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Toxic for fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packaging:**

- **Recommendation:**

All waste must be handled in accordance with local, state and federal regulations. This material and its container must be disposed of in a safe way.

## SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, IMDG, IATA**

UN2588

- **14.2 UN proper shipping name**

- **ADR**

2588 PESTICIDE, SOLID, TOXIC, N.O.S. (Cycloheximide), ENVIRONMENTALLY HAZARDOUS

- **IMDG, IATA**

2588 PESTICIDE, SOLID, TOXIC, N.O.S. (Cycloheximide)

- **14.3 Transport hazard class(es)**

- **ADR**



- **Class**

6.1 Toxic substances.

- **Label**

6.1

- **IMDG, IATA**



- **Class**

6.1 Toxic substances.

- **Label**

6.1

- **14.4 Packing group**

- **ADR, IMDG, IATA**

I

- **14.5 Environmental hazards:**

- **Marine pollutant:**

Environmentally hazardous substance, solid

- **Special marking (ADR):**

No

Symbol (fish and tree)

- **14.6 Special precautions for user:**

- **Danger code (Kemler):**

Warning: Toxic substances.

- **EMS Number:**

66

F-A,S-A

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**

Not applicable.

- **Transport/Additional information:**

- **ADR**

- **Limited quantities (LQ)**

0

- **Excepted quantities (EQ)**

Code: E5

Maximum net quantity per inner packaging: 1 g

Maximum net quantity per outer packaging: 300 g

- **Transport category**

1

- **Tunnel restriction code**

C/E

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<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p style="text-align: center;">0</p> <p>Code: E5</p> <p>Maximum net quantity per inner packaging: 1 g</p> <p>Maximum net quantity per outer packaging: 300 g</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN2588, PESTICIDE, SOLID, TOXIC, N.O.S. (Cycloheximide), ENVIRONMENTALLY HAZARDOUS, 6.1, I</p>

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. For research use only. Not for drug, household or other uses.

- **Department issuing MSDS:** Customer service
- **Contact:** tel. +1 610-941-0430
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
  - ICAO: International Civil Aviation Organisation
  - ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - Acute Tox. 2: Acute toxicity, Hazard Category 2
  - Muta. 2: Germ cell mutagenicity, Hazard Category 2
  - Repr. 1B: Reproductive toxicity, Hazard Category 1B
  - Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

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