Safety Data Sheet

Revision Date: 4/5/2022

Section 1: Chemical Identification

1.1 Chemical Identification

Product Name: Cycloheximide

Alternative Name: Actidione, Kaken, Naramycin A, Actidion, Actidone, Hizarocin, Neocycloheximide

Catalog Number: C-930

1.2 Relevant Uses and Uses Advised Against

Recommended use: This product is not for use in humans. It is for research purposes only.

1.3 Supplier Contact Information

Distributed by: Gold Biotechnology, Inc.
1328 Ashby Rd.
St. Louis, MO 63132

Phone: (314) 890-8778

Fax: (314) 890-0503

Email: **contactgoldbio86@goldbio.com**

1.4 Emergency Contact Information

Emergency Phone: (800)248-7609 (Monday-Friday, 9:00 a.m. – 5:00 p.m. CST)

Section 2: Hazardous Information

2.1 GHS Classification

Acute Toxicity, Oral (Category 2)
Germ Cell Mutagenicity (Category 2)
Reproductive Toxicity (Category 1B)
Acute Aquatic Toxicity (Category 2)
Chronic Aquatic Toxicity (Category 2)
Skin Irritation (Category 2)

2.2 GHS Label Elements, Including Precautionary statements

DANGER!

2.3 Hazard Statements

H300: Fatal if swallowed
H341: Suspected of causing genetic defects

H360: May damage fertility or the unborn child
H411: Toxic to aquatic life with long lasting effects
H315: Causes skin irritation

2.4 Precautionary Statements

P201: Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood
P264: Wash skin thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P308+313: IF exposed or concerned: Get medical advice/attention
P391: Collect spillage
P405: Store locked up
P501: Dispose of contents/container to an approved waste disposal plant

2.8 HMIS Classification

Health Hazard:	4
Chronic Health Hazard:	*
Flammability:	0
Physical Hazards:	0

2.9 NFPA Rating

Health Hazard:	3
Fire:	0
Reactivity Hazard:	0

Section 3: Composition/Information on Ingredients

3.1 Composition

Identity:	Cycloheximide
IUPAC:	4-[(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl] piperidine-2,6-dione
Synonyms:	Actidione, Kaken, Naramycin A, Actidion, Actidone, Hizarocin, Neocycloheximide
CAS Number:	66-81-9
Molecular Formula:	$C_{15}H_{23}NO_4$
Molecular Weight:	281.35 g/mol

Section 4: First Aid Measures

4.1 Detailed First Aid Measures

Inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin:	Immediately wash skin copiously with soap and water. Take victim immediately to hospital. Consult a physician.
Eye:	Immediately rinse out with water for at least 15 minutes. Assure

adequate flushing by separating the eyelids with fingers. Consult a physician.

Ingestion: Wash out mouth with water. Drink plenty of water. Consult a physician. Never give anything by mouth to an unconscious person.

Notes to Physician: Treat symptomatically and supportively.

4.2 Most Important Symptoms And Effects, Either Acute Or Delayed

The most important known symptoms and effects are described in the labeling (see section2). And /or in section 11.

4.3 Indication of immediate medical attention and special treatment needed

Not available

Section 5: Fire Fighting Measures

5.1 Conditions of flammability:

Not flammable or combustible.

5.2 Suitable extinguishing media:

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

5.3 Specific hazards arising from the chemical

During a fire, highly toxic gases may be generated by thermal decomposition or combustion – Carbon oxides, Nitrogen oxides (NOx).

5.4 Specific protective actions for fire-fighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

6.2 Environmental precautions:

Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up:

Soak up with absorbent material, discard.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Always wear personal protective equipment (PPE, see section 8).

7.2 Conditions for safe storage, including and incompatibilities:

Keep container tightly closed.

Store at room temperature.

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Contains no substances with occupational exposure limit values.

8.2: Appropriate engineering controls:

Contains no substances with occupational exposure limit values.

8.3 Personal Protective Equipment (PPE):

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 outer surface of glove - 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 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).

Other Protective Clothing or Equipment: Wear appropriate protective clothing to prevent exposure.

Section 9: Physical and Chemical Properties

9.1 General chemical and physical properties

Appearance:	Off White Powder
Odor:	Not Available
Odor Threshold:	Not Available
pH:	Not Available
Melting Point:	119.5 - 121°C
Freezing Point:	115 - 116.5°C
Boiling Point/Range:	Not Available
Flash Point:	Not Available
Evaporation Rate:	Not Available
Lower Explosion Limit:	Not Available

Upper Explosion Limit:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	Not Available
Relative Density:	Not Available
Solubility:	Slightly Water Soluble
Partition Coefficient n-octanol/water:	log Pow: 0.55
Auto-Ignition Temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity:	Not Available

Section 10: Stability and Reactivity Data

10.1 Reactivity:

Not available

10.2 Chemical Stability:

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions:

Not available.

10.4 Conditions to avoid:

Incompatible materials.

10.5 Incompatible materials:

Bases, Strong Oxidizing Agents, Acid Anhydrides, Acid Chlorides

10.6 Hazardous decomposition products:

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

Section 11: Toxicological Information

11.1 Toxicological effects

Acute toxicity:

Skin corrosion/irritation:

Standard Draize Test:
Rabbit (Administration onto the skin) - 1 pph/24h - Moderate reaction

Respitory or skin sensitization:

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity:

Laboratory experiments have shown mutagenic effects. In vitro tests have shown mutagenic effects.
Mutation Test Systems - Human HeLa cell - 35 µmol/l
DNA Inhibition - Human cells, not otherwise specified - 100 mg/l
Cytogenetic Analysis - Human cells, not otherwise specified - 100 mg/l
Micronucleus Test - Mouse - 10 mg/kg
DNA Damage - Mouse - Lymphocyte - 50 µmol/l

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 probable, possible or confirmed human carcinogen by ACGIH.

NTP: 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 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:

May cause congenital malformation in the fetus. Presumed human reproductive toxicant.
Intraperitoneal (Rat Female) TD_{Lo} =1 mg/kg (15 days after conception) - Toxic Effects: Specific Developmental Abnormalities - Central Nervous System; Hepatobiliary System / Effects on Embryo or Fetus - Fetotoxicity (except death, e.g., stunted fetus) / Effects on Newborn - Growth statistics (e.g. %, reduced weight gain)
Intraperitoneal (Rat Female) TD_{Lo} =300 µg/kg (13 days after conception) - Toxic Effects: Fertility - post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants) / Effects on Embryo or Fetus - Fetotoxicity (except death, e.g., stunted fetus)
Intraperitoneal (Rat Female) TD_{Lo} =250 µg/kg (15 days after conception) - Toxic Effects: Specific Developmental Abnormalities - Central Nervous System; Cardiovascular (Circulatory) System; Craniofacial (including nose and tongue)
Intraperitoneal (Rat Female) TD_{Lo} =1 mg/kg (4 days after conception) - Toxic Effects: Maternal Effects - uterus, cervix, vagina

STOT-single exposure:

Not available.

STOT-repeated exposure:

See Additional Information

Aspiration hazard:

Not available.

Likely routes of exposure:

Respiratory organs, mouth, skin, and eyes.

Symptoms of exposure:

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

Additional Information:

RTECS: MA4375000

STOT-repeated exposure:

Intraperitoneal (Rat) TD_{Lo} =400 mg/kg (4W-I) - Toxic Effects: Liver - changes in liver weight / Endocrine - changes in thymus weight / Immunological Inculding Allergic - decreased inhumoral immune response

Oral (Monkey) TD_{Lo} =56 mg/kg (7D-I) - Toxic Effects: Liver - other changes / Kidney, Ureter, Bladder - other changes / Blood - changes in erythrocyte (RBC) count

Section 12: Ecological Information

12.1 Toxicity:

Fish - LC_{50} (*Oncorhynchus mykiss*) 96h = 1.4 mg/l

12.2 Persistence and degradability:

Can form stable derivatives such as the acetate, oxime and semicarbanzone. These derivatives are active as fungicides.

12.3 Bioacumulative potential:

K_{OW}= 0.55

12.4 Mobility in soil:

Not available.

12.5 Other adverse effects:

In the absence of complete ecological information, treat product as environmentally hazardous. Use proper storage, handling, and disposal to prevent unintentional release into the environment.

Section 13 Disposal Considerations

Dispose of product in accordance with local rules and regulations.

Section 14: Transport Information

14.1 US Department of Transportation (DOT)

UN Number:	2811
Proper shipping name:	Toxic solids, organic, n.o.s. (Cycloheximide)
Class:	6.1
Packing Group:	I
Marine Pollutant:	Yes

14.2 International Maritime Dangerous Goods (IMDG):

UN Number:	2811
Proper shipping name:	Toxic solids, organic, n.o.s. (Cycloheximide)
Class:	6.1
Packing Group:	I
Marine Pollutant:	Yes

14.2 International Air Transportation Association (IATA)

UN Number:	2811
Proper shipping name:	Toxic solids, organic, n.o.s. (Cycloheximide)
Class:	6.1
Packing Group:	I
Marine Pollutant:	Yes

Further Information

EmS codes: F-A, S-A

Section 15: Regulatory Information

SARA 302 Components:

The following components are subject to reporting levels established by SARA Title III, Section 302:Extremely Hazardous Substance - Cycloheximide (CAS no: 66-81-9) Threshold Planning Quantity (TPQ): 100/10,000 lbs

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, Chronic Health Hazard

Massachusetts Right To Know Components:	CAS - No.
Cycloheximide	66-81-9
Pennsylvania Right To Know Components:	CAS - No.
Cycloheximide	66-81-9
New Jersey Right To Know Components:	CAS - No.
Cycloheximide	66-81-9

California Prop. 65 Components:

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm:
Cycloheximide (CAS No: 66-81-9) Revision Date: 01/01/1989

Section 16: Other Information

While Gold Biotechnology, Inc. believes the information contained herein to be true and accurate, it has relied on information provided by others. Gold Biotechnology, INC. makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or with respect to the results to be obtained from the use of the product. Gold

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Preparation Information

Gold Biotechnology
Content/Marketing Department
(800) 248-7609
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