

Material Safety Data Sheet

SECTION 1 IDENTIFICATION

Product Name: Kasugamycin 3% + oxine-copper 30% SC

Chemical name: 8-Hydroxyquinoline copper complex; (oxine-copper)

[5-amino-2-methyl-6-(2,3,4,5,6-pentahydroxycyclohexyloxy)tetrahydropyran-3-yl]amino- α -iminoacetic acid; (Kansugamycin)

Other means of identification: /

Recommended use of the chemical and restrictions on use: This material is a kind of pesticide.

Company / Undertaking Identification

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SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity - Oral Category 4

Serious eye damage/eye irritation Category 1

Specific target organ toxicity (single exposure) Category 1

Category 1 respiratory system

Specific target organ toxicity (repeated exposure) Category 2

Category 2 liver

Acute aquatic toxicity Category I

Chronic aquatic toxicity Category 1

GHS Label elements, including precautionary statements



Signal word: Danger.

Hazard statement(s): Hazard statements

H318 - Causes serious eye damage

H302 - Harmful if swallowed

H410 - Very toxic to aquatic life with long lasting effects

H400 - Very toxic to aquatic life

H370 - Causes damage to the following organs: respiratory system

H373 - May cause damage to the following organs through prolonged or repeated exposure: liver

Precautionary statement(s):**Prevention:**

- Wear protective gloves/protective clothing/eye protection/face protection
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product
- Avoid release to the environment

Response:

- IF exposed: Call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a POISON CENTER or doctor/physician
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell • Rinse mouth
- Collect spillage.

Storage:

Store locked up.

Disposal:

Dispose of contents/container to an approved waste disposal plant

Other hazards which do not result in classification: /

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Kasugamycin	6980-18-3	3
Oxine-copper	10380-28-6	30
Co-formulants	/	Up to 100%

SECTION 4 FIRST AID MEASURES**Description of necessary first aid measures**

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: Those who take it by mistake should vomit immediately and send to the hospital for diagnosis and treatment for symptomatic treatment.

Most important symptoms and effects, both acute and delayed: /

Indication of immediate medical attention and special treatment needed: /

SECTION 5 FIRE-FIGHTING MEASURES

Suitable extinguishing media: Foam. Dry chemical powder. Carbon dioxide. Water spray or fog - Large fires only.

Special hazards arising from the chemical: Combustible in case of open flame and high heat.

Special protective actions for fire-fighters: Fire personnel should wear gas masks and full body fire suits, put out the fire in the upwind direction, and move the container from the fire to the open as much as possible. The emergency personnel wore positive pressure self-contained breathing apparatus, fire and poison proof clothing and fire protection boots. Do not contact the leak directly. Restricted Spaces such as flood drainage ditches are prohibited from using water.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Environmental precautions: Prevent, by any means available, spillage from entering drains or water courses.

Methods and materials for containment and cleaning up: Minor Spills: absorption with sand. Major Spills: build a dike or dig a pit for containment. They are collected in dedicated containers and then either collected, transferred, recycled or disposed of harmlessly.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials. When handlings, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.

Conditions for safe storage, including any incompatibilities: Store in original containers. Keep containers securely sealed. Store in a cool, dry area protected from environmental extremes. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this MSDS.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Maximum allowable concentration: No standard has been established

Monitoring method: High performance liquid chromatography

Appropriate engineering controls: The production process is closed to provide adequate local exhaust.

Respiratory system protection : Filter gas mask (half mask) can be worn in high concentration exposure, and air respirator or oxygen respirator should be worn in emergency rescue or evacuation.

Eye/face protection: Safety glasses with side shields. Chemical goggles.

Skin protection: Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber.

Other protection: Prohibit smoking, eating and drinking water in the workplace, and avoid drinking alcoholic beverages before work. After work, clean thoroughly, maintain good hygiene habits, pay

attention to personal hygiene.

Thermal hazards: /

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Green opaque flow suspension liquid
Odour	/
Odour Threshold	/
pH	3.0-6.0
Boiling point(°C)	N/A
Vapour pressure (kPa)	N/A
Vapour density	N/A
Heat of combustion(kJ/mol)	N/A
Stagnation temperature(°C)	N/A
Critical pressure (MPa)	N/A
Octanol/water partition coefficient	N/A
Flash point(°C)	No flash point was observed
Upper limit of explosion%(V/V)	N/A
Lower limit of explosion%(V/V)	N/A
Autoignition temperature(°C)	N/A
Solubility	/

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.

Forbidden compound: Strong oxidizing agent

Avoid contact conditions: Open flame, high heat.

Polymerization hazard: Cannot occur.

Decomposition products: None.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, Ingestion, skin, eyes.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects

The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation. Accidental ingestion of the material may be harmful. Skin contact is not thought to produce harmful health effects. Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Chronic health effects: /

Numerical measures of toxicity (such as acute toxicity estimates):

Acute Oral Toxicity (Rat): LD₅₀ = 3690 mg/kg.b.wt.

Acute Dermal Toxicity (Rat): LD₅₀>2000 mg/kg

Acute Eyes Irritation (Rabbit): Moderate irritation
Acute Dermal Irritation (Rabbit): Non-irritant
Skin Sensitization(Guinea Pig): Weak-sensitization

SECTION 12 ECOLOGICAL INFORMATION

Toxicity:

Toxicity to Fish : Acute toxicity for Zebra fish LC_{50} (96h) = 2.37×10^{-2} mg a.i./L;
Toxicity to Bird: Acute oral toxicity for Quail LD_{50} (7d) = 1.59×10^3 mg a.i./kg·bw
Toxicity to Bee: Acute oral toxicity LC_{50} (48h) >115 µg a.i. /bee;
Acute dermal toxicity LD_{50} (48h) >100 µg a.i. /bee;
Toxicity to Daphnia Magna: LC_{50} (48h) = 4.00×10^{-2} mg a.i./L;
Toxicity to Green alga: E_1C_{50} (72h) = 8.18×10^{-2} mg a.i. /L;
Toxicity to Silkworm: LC_{50} (96 h) > 2.00×10^3 mg a.i. /L.
Toxicity to Earthworm: LC_{50} (14d) >100 mg a.i. /kg dry soil;
Toxicity to Trichogramma: LR_{50} (24h) >25.4 mg a.i./cm²;
Toxicity to Ladybird: LR_{50} (14d) >7.63 µg a.i./cm².

Persistence and degradability: /

Bioaccumulative potential: /

Mobility in soil: /

Other adverse effects: /

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: Recycle wherever possible or consult manufacturer for recycling options. Consult Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

UN number: /

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class(es): 6.1

Packaging group: III.

Environmental hazards: Marine pollutant.

Transportation precautions: During railway transportation, calcium plastic corrugated boxes can be used for outer packaging. However, it must pass the packaging test and be approved by the Railway Bureau. Before transportation, check whether the packaging container is complete and sealed, and ensure that the container does not leak, collapse, fall, or damage during transportation. It is strictly prohibited to transport with acids, oxidants, food and food additives. Transportation vehicles should be equipped with the corresponding variety and quantity of fire fighting equipment and leakage

emergency treatment equipment. During transportation, it should be protected from exposure, rain and high temperature. Road transportation should be in accordance with the prescribed routes, do not stop in residential areas and densely populated areas.

SECTION 15 REGULATORY INFORMATION

Regulations:

Regulations on the safety Management of Chemical Dangerous Goods (adopted at the 52nd Executive Meeting of The State Council on January 9, 2002), Regulations on the Implementation of the Safety Management of Chemical Dangerous Goods (Huarao Fa [1992] No. 677), Regulations on the safe use of chemicals in the workplace ([1996] No. 423) and other regulations, Corresponding regulations have been made for the safe use, production, storage, transportation, handling and unloading of chemical dangerous goods. The classification and labeling of commonly used hazardous chemicals (GB 13690-92) classifies this substance as Class 6.1 toxic goods.

SECTION 16 OTHER INFORMATION

References	<ol style="list-style-type: none"> 1. Zhou Guotai, Chemical Dangerous Products Safety Technology Book, Chemical Industry Press, 1997. 2. The Toxic Chemicals Management Office of the State Environmental Protection Administration and Beijing Research Institute of Chemical Industry, Environmental Data Manual of Chemical Toxicity Regulations, China Environmental Science Press, 1992. 3. Canadian Centre for Occupational Health and Safety, CHEMINFOD atabase, 19984. Canadian Centre for Occupational Health and Safety, RTECS Database.
Form Date	23-April-2023

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information (such as boiling point does not exist for the solid) in the table with "/" logo.