

PRODUCT : KASUGAMYCIN 4SL
EFFECTIVE DATE : July 2020
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1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product name KASUGAMYCIN 4SL
Common name Kasugamycin
Chemical name 2-amino-2-[(2R,3S,5S,6R)-5-amino-2-methyl-6-[(2S,3S,5S,6R)-2,3,4,5,6-pentahydroxycyclohexyl]oxyoxan-3-yl]iminoacetic acid

Supplier **NOVA AGRO (HK) LIMITED**
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Common name: Kasugamycin
Chemical name: 2-amino-2-[(2R,3S,5S,6R)-5-amino-2-methyl-6-[(2S,3S,5S,6R)-2,3,4,5,6-pentahydroxycyclohexyl]oxyoxan-3-yl]iminoacetic acid (IUPAC)
CAS number: 6980-18-3
Chemical class: aminoglycosidic antibiotic
Chemical formula: C₁₄H₂₅N₃O₉
Use: A soluble concentrate bactericide for the control of a variety of bacterial diseases on crops as indicated.
Formulation: Soluble concentrate (SL) 40g/l.
Hazardous ingredients of toxicological concern:
Ingredient: Concern: present: Kasugamycin 40g/l
Harmful if inhaled.

3. HAZARDS IDENTIFICATION**Acute Health Hazards**

Eye: May cause slight irritation. The degree of injury will depend on the amount and duration of the contact and the speed and thoroughness of the first aid treatment. Adverse effects resulting from an exposure may include temporary redness or swelling.

Skin: A single, prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

Ingestion: Incidental ingestion of small amounts is not likely to cause harm.

Inhalation: Product is a non-volatile liquid unlikely to cause harm by inhalation.

Chronic Health Hazards (Including Cancer): Kasugamycin Technical is not carcinogenic.

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Teratology (Birth Defects) Information: Kasugamycin Technical is not teratogenic.

Reproduction Information: No evidence of reproductive toxicity.

Mutagenicity: Kasugamycin Technical is not mutagenic.

4. FIRST AID MEASURES

- **If in eyes:**

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, continue rinsing. Call a poison control centre or doctor for treatment advice.

- **If on skin or clothing:**

Take off contaminated clothing. Rinse skin with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

- **If inhaled:**

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

- **If swallowed:**

Call a poison control centre or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammability: Not available.

Flash Point: Not available.

Combustion Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

Extinguishing Media: Carbon dioxide, dry chemical powder, polymer foam, water spray.

Special Fire fighting Procedures: Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire/Explosion Hazards: None known.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Do not allow entering drains or watercourses. When the product contaminates public waters, inform appropriate authorities in accordance with local regulations.

Occupational spill: Remove all sources of ignition. For small liquid spills, soak up with sand or other suitable non-combustible absorbent material, and place into containers for subsequent disposal. For large spills, contain liquid far ahead of spill. Contain spillage and contaminated water for subsequent disposal. Do not flush spilled material into drains. Keep spectators away.

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7. HANDLING AND STORAGE

Handling: Harmful by inhalation or if swallowed. Avoid contact with eyes, prolonged contact with skin, and inhalation of fumes. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the herbicide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Store in its original labelled container in shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children and animals. Local regulations should be complied with.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Wear safety glasses

Respiratory/Ventilation Requirements: Handle in a totally enclosed system or use with local exhaust ventilation. Wear respirator in confined areas or where potential for inhalation of material.

Skin Protection: Wear rubber gloves, wear impervious clothing and boots.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark blue-green

Odour: NDA

Physical State: Liquid

pH: 2.5~3.0

Specific Gravity: 1.02~1.04 @ 20°C

10. STABILITY AND REACTIVITY

Stability: This material is stable under room temperature and normal conditions.

Conditions to Avoid: Excessive exposure to heat or sunlight.

Incompatibles: Strong oxidizers, Strong alkalis.

Flammable Point: Not flammable

Auto Ignition: NA

Incompatibility With Other Materials: Strong alkaline pesticides

11. TOXICOLOGICAL INFORMATION

Acute:

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Eye Irritation: (Rabbit) Slightly irritating

Skin Irritation: (Rabbit) Non-irritating

Dermal Toxicity: (Rat) LD₅₀ > 2,000 mg/kg

Oral Toxicity: LD₅₀ > 5,000 mg/kg (rat)
LD₅₀ > 5,000 mg/kg (mouse)

Subchronic Toxicity: For Kasugamycin Technical:

90 day oral NOEL in mouse = 1,000 ppm

90 day oral NOEL in rat = 300 ppm

90 day oral NOEL in dog = 300 ppm

Chronic/Carcinogenicity: For Kasugamycin Technical:

Not a carcinogen

Mouse NOEL = 300 ppm

Rat NOEL = 300 ppm

Mutagenicity: Structured chromosome aberration: Negative (active ingredient)

Ames Test: Negative (active ingredient)

Unscheduled DNA synthesis: Negative (active ingredient)

V/79HGPRT Forward mutation assay: Negative (active ingredient)

Micronucleus test: Negative (active ingredient)

Teratology/Developmental Toxicity: Not teratogenic in rabbits or rats.

Reproductive Toxicity: No evidence of reproductive toxicity.

12. ECOLOGICAL INFORMATION

Bird Toxicity:

Bobwhite quail oral LD₅₀ >4000 mg/kg

Fish Toxicity:

Quail LD₅₀ > 4,000 ppm

Rainbow Trout 96-hr LC₅₀ > 1,000 ppm

Bluegill 96-hr LC₅₀ > 1,000 ppm

Guppy 96-hr LC₅₀ > 1,000 ppm

Other Toxicity:

Daphnia magna 3-hr LC₅₀ > 40 ppm

Alga EC₅₀ = 11 mg/L

Alga NOEC = 72 mg/L

Honeybee contact LD₅₀ > 40/mg/bee

13. DISPOSAL CONSIDERATIONS

Preferred method of disposal is by incineration. End users must dispose of any unused product as per the label recommendations and in accordance with all applicable laws and regulations. Check governmental regulations and local authorities for approved disposal of this material

14. TRANSPORT INFORMATION

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D.O.T. Shipping Name: (Not regulated)

Technical Shipping Name: Kasugamycin hydrochloride hydrate (liquid)

Packing Group: NA

D.O.T. Hazard Class: NA

U.N/N.A. Number: NA

Product RQ (lbs): NA

D.O.T. Label: NA

D.O.T. Placard: NA

Marine Pollutant: NA

15. REGULATORY INFORMATION

International Regulations:

EEC Classification: NA

Risk Phrases: NA

Safety Phrases: NA

16. OTHER INFORMATION

PACKING AND LABELLING

Packed in fluorinated 1, 5, 10, 20 litre plastic containers and labelled according to South African regulations and guidelines.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.
