Validamycin -MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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1. Chemical Product Identification

Product Name: Validamycin

Molecular Formula: C₂₀H₃₅NO₁₃

Molecular Weight: 497.49

Structural Formula:

Chemical Name: (1R,2R,3S,4S,6R)-2,3-dihydroxy-6-hydroxymethyl-4-[(1S,4R,5S,6S)-4,5,6-trihydroxy-3-hydroxymethylcyclohex-2-enylamino]cyclohexyl

β-D-glucopyranoside

Form: Powder Color: White

Odor: Not applicable CAS No.: 37248-47-8

2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Validamycin	37248-47-8	60%

Other ingredients 4	40%
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3. Hazards Identification

May be harmful if swallowed, inhaled or absorbed through skin.

4. First Aid Measures

Skin: Immediately wash skin with soap and water, consult a physician.

Eye: Rinse out with water, with the eyelid held wide open, flush for 15 minutes, consult a physician.

Inhalation: Remove to fresh air, consult a physician.

Ingestion: Wash out mouth with water, make victim drink plenty of water, induce vomiting, consult a physician.

5. Fire-Fighting Measures

Flash point: N/A

Extinguishing media: water, carbon dioxide, dry chemical powder or foam

Special fire fighting procedures: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes

Unusual fire and explosion hazards: emits toxic fumes under fire conditions.

6. Accidental Release Measures

Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust.

7. Handling and Storage

Rooms used for storage only should be soundly constructed and fitted with secure locks. Floors should be kept clear and floors should be impervious and sound.

8. Exposure Controls/Personal Protection

Respiratory protection: NIOSH/MSHA-approved respirator, do not breathe dust.

Ventilation: Mechanical exhaust required

Protective gloves: chemical-resistant gloves required

Eye protection: safety goggles

Work/hygienic practices: avoid contact with eyes, skin and clothing; wash skin thoroughly and remove contaminated clothing after handling.;

9. Physical and Chemical Properties

Physical state and appearance: White powder

Odor: Not applicable Melting Point: 125.9°C

Vapor Pressure: 2.6 X 10⁻⁶Pa at 25℃.

Octanol-water partition coefficient: Log P_{OW} = -8.32 at pH 7 and 20°C

Solubility: In water 610g/l, in Ethyl acetate 10mg/l, in Acetone 26.6 mg/l, in Methanol

62300mg/l, in Toluene 10mg/l (at 20°C).

10. Stability and Reactivity

Stability: stable under ordinary conditions of use and storage

Materials to avoid: water

Hazardous decomposition or byproducts: none

Hazardous polymerization: will not occur

11. Toxicological Information

Acute Toxicity

Oral: LD50 mouse >2g/kg, LD50 rat >20g/kg

Subcutaneous: LD50 rat >5g/kg Inhalation: May cause irritation Eye irritation: May cause irritation Skin Irritation: May cause irritation

Sensitization: Possible sensitivity in some individuals

Chronic toxicity: Practically non-toxic in rats. No observed effect level (NOEL) during 2

years:

40.4 mg/kg daily

Carcinogenicity: Not known Mutagenicity: Not known

12. Ecological And Ecotoxicological Information

Effects on Birds: No data are currently available.

Effects on Aquatic Organisms: Validamycin is relatively non-toxic to fish.

LC₅₀ (96h) for carp: 10 mg/l.

Effects on Other Animals (Nontarget species): Validamycin is not toxic to bees.

Degradability: Undergoes rapid microbial degradation in soil. Half-life is less than 5 hours.

13. Disposal Considerations

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. Observe all federal, state and local environmental regulations.

14. Transport Information

Not applicable.

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.