



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD

ADD: NO.52 PUCHANG ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT,
WENZHOU ZHEJIANG P.R. CHINA

Tel: +86-577-88905587

Fax: +86-577-88905567

Email: info@rayfull.com

sales@rayfull.com

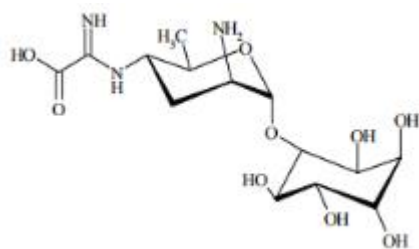
1. Chemical Product Identification

Common Name: Kasugamycin 70% TC

Molecular Formula: C₁₄H₂₅N₃O₉

Molecular Weight: 379.36

Structural Formula:



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

Form: Powder

Color: White to off-white

CAS No.: 6980-18-3

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Kasugamycin	6980-18-3	70
Other ingredients	---	30

3. Hazards Identification



May be harmful if ingested, inhaled, or absorbed through the skin. May cause irritation. To the best of our knowledge, the toxicological properties of this compound have not been fully investigated. Exercise appropriate precautions to prevent opportunities for inhalation, and to prevent direct contact with skin and eyes. All uncharacterized chemicals should be treated as suspected toxins.

4. First Aid Measures

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion: If swallowed, seek medical advice immediately and show this container or label.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration.

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 Firefighting 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

Clean up Procedures: Wearing appropriate protective gear as outlined under "Protective equipment" wipe up spill and place in sealed container and hold for disposal. Avoid raising dust. Ventilate the area and wash spill site after material has been removed.

7. Handling And Storage

Handling: Avoid contact with skin and eyes. Ventilation required. Keep away from: sparks,



open flame and direct sunlight.

Storage: Keep in a dry, cool and well-ventilated place. Keep out of the reach of children
Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur.

8. Exposure Controls/Personal Protection

Protective Equipment: For spill cleaning up, wear suitable protective clothing, chemical resistant rubber gloves, rubber boots, and chemical safety goggles. Self-contained breathing apparatus or NIOSH/MSHA approved respirator is required.

9. Physical and Chemical Properties

Appearance: White to off-white powder

Moisture water: $\leq 3.0\%$

Insolubility in water: $\leq 1.0\%$

pH: 3.0-5.0

Thermal storage stability: Qualified

Melting point: 206-210°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.

11. Toxicological Information

Acute oral LD50 for rats: >5000 a.i.mg/kg

Acute dermal LD50 for rats: >2000 mg/kg (Kasugamycin hydrochloride hydrate)

Acute inhalation toxicity LC50 (4 h) for rats: >2.07 a.i.mg/L (Kasugamycin hydrochloride hydrate)

Skin irritation: Non-irritating to skin (rabbits)

Eye irritation: Non-irritating to eyes (rabbits)

Skin sensitization for guinea pig: Non-sensitizing

12. Ecological And Ecotoxicological Information



Effect on birds: Acute oral LD50 for Bobwhite quail is >4000 a.i.mg/kg.

Effect on fish: Acute LC50 (96 h) for Carp is >40 a.i.mg/l.

Effects on aquatic invertebrates: Acute EC50 (48 h) for Daphnia magna is >40 a.i.mg/l.

Effects on bees: contact acute 48 hour LD50 is >40 a.i.µg/bee.

13. Disposal Considerations

Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

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.