



Molekula Limited
Lingfield Way
Darlington
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DL1 4XX
United Kingdom
+44 (0) 3302 000333
info@molekula.com

Certificate of Analysis

Technical Data Sheet

Product Name	Rifampicin
Product No	32609202
CAS Number	13292-46-1
Expiry/Re-test Date	Jun 24th, 2025
Batch Number	236622
Storage Temperature	-15 to -20 °C
Molecular Weight	822.94

	Specification	CofA
pH	4.5 - 6.5	5.7
Loss on Drying	max 1.0%	0.31%
Sulphated Ash	max 0.1%	0.08%
Water Content (KF)	≤1.0%	0.74%
Appearance	Orange to red/brown powder	Conforms
Assay (dry basis)	min 96.5%	99.2%



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Technical Data Sheet

Product Name	Linezolid
Product No	81026216
CAS Number	165800-03-3
Expiry/Re-test Date	Jan 30th, 2026
Batch Number	213454
Storage Temperature	2 to 8 °C
Molecular Weight	337.35

	Specification	CofA
Specific rotation	-9 to -14	-11.05
Heavy metals	<20ppm	Conforms
Loss on Drying	<1.0%	0.05%
Assay	98 - 102%	99.65%
Residue on Ignition	<0.2%	0.03%
Total Impurities	<1.0%	0.05%
Appearance	White crystalline powder	White crystalline powder
Any unknown impurity	<0.5%	0.05%



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Product Name	Moxifloxacin hydrochloride
Product No	85126157
CAS Number	186826-86-8
Expiry/Re-test Date	Oct 10th, 2025
Batch Number	230369
Storage Temperature	2 to 8 °C
Molecular Weight	437.89

	Specification	CofA
Water	4.5% max	2.0%
pH	3.9-4.6	Conforms
Assay	98.0% min	99.1%
Appearance of Solution	Clear	Conforms
Appearance	Light yellow or yellow powder	Light yellow powder



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Product Name	Capreomycin sulfate (Capastat sulfate)
Product No	90021020
CAS Number	1405-37-4
Expiry/Re-test Date	Dec 23rd, 2024
Batch Number	234526
Storage Temperature	2 to 8 °C
Molecular Weight	752.76

	Specification	CofA
pH	4.5 - 7.5	6.1
Loss on Drying	<10%	3.2%
Assay	>700IU/mg	833 IU/mg
Bacterial endotoxins	<2.5IU/mg, 7000IU/ml	Conforms
Sulfated ash	<3.0%	0.3%
Appearance	White crystalline powder	White crystalline powder
Capreomycin I HPLC	>90%	97.9%



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Product Name	Ethambutol dihydrochloride
Product No	15593604
CAS Number	1070-11-7
Expiry/Re-test Date	Aug 6th, 2024
Batch Number	203960
Storage Temperature	Ambient
Molecular Weight	277.23

	Specification	CofA
Melting Point	199°C - 204°C	Conforms
Specific rotation	+6.0°- +7.0 deg	+6.32
Heavy metals	10ppm max	<10ppm
Loss on Drying	0.5% max	0.28%
Storage Temperature	+20 ° C	+20 ° C
Molecular Weight	189.08	189.08
Assay	98.5% min	99.68%
Appearance	White crystalline powder	White crystalline powder



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Technical Data Sheet

Product Name	Levofloxacin
Product No	24520686
CAS Number	100986-85-4
Expiry/Re-test Date	Oct 16th, 2025
Batch Number	212412
Storage Temperature	2 to 8 °C
Molecular Weight	361.37

	Specification	CofA
Water	2.0%—3.0%	2.4%
Assay	98% - 102%	98.8%
Optical Rotation	-92° - -106°	Conforms
Residue on Ignition	≤0.2%	0.01%
Total Impurities	≤0.5%	0.12%
Appearance	White or yellow light crystalline powder	White powder
Identification (IR)	Conforms to the spectrum of Levofloxacin RS	Conforms
Heavy Metal	≤10ppm	Conforms
Identification (HPLC)	The retention time of the major peak of the sample solution corresponds to that of the standard solution, as obtained in the Assay	Conforms
Total Impurities	≤0.5%	0.12%
N-Desmethyl levofloxacin	≤0.3%	Conforms
Diamine derivative	≤0.3%	Conforms
Levofloxacin N-oxide	≤0.3%	Conforms
9-Desfluoro levofloxacin	≤0.3%	Conforms
D-Isomer	≤0.8%	Conforms



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Technical Data Sheet

Product Name	Isoniazid
Product No	26989064
CAS Number	54-85-3
Expiry/Re-test Date	May 23rd, 2024
Batch Number	213778
Storage Temperature	Ambient
Molecular Weight	137.14

	Specification	CofA
Physical Appearance	White crystalline powder	White crystalline powder
pH	6.0 - 8.0	7.3
Loss on Drying	0.5% max	0.10%
Assay	98.0% min	99.5%
Residue on Ignition	0.1% max	Conforms
MP	170 - 174°C	171.2 - 172.2 Deg C



SAFETY DATA SHEET

Amikacin base

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	Amikacin base
Product number	29010680
CAS number	37517-28-5
EC number	253-538-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	For research purposes only.
Uses advised against	Not suitable for human consumption or veterinary purposes.

1.3. Details of the supplier of the safety data sheet

Supplier	Molekula Ltd. Lingfield Way, Darlington, DL1 4XX, United Kingdom +44 (0) 3302000333 info@molekula.com
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1.4. Emergency telephone number

+44 (0) 7769276927

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards	Not Classified
Health hazards	Eye Dam. 1 - H318 Skin Sens. 1 - H317 Repr. 1B - H360 STOT RE 1 - H372
Environmental hazards	Not Classified

2.2. Label elements

EC number	253-538-5
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Hazard pictograms



Signal word

Danger

Amikacin base

Hazard statements	H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H360 May damage fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure.
Precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust. P261 Avoid breathing dust. P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER/ doctor. P314 Get medical advice/ attention if you feel unwell. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current UK criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	Amikacin base
CAS number	37517-28-5
EC number	253-538-5
Chemical formula	C ₂₂ H ₄₃ N ₅ O ₁₃

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
Skin contact	It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

Amikacin base

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Temporary irritation.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	None known.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO ₂). Carbon monoxide (CO). Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid contact with skin and eyes.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.
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6.3. Methods and material for containment and cleaning up

Amikacin base

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. May damage fertility or the unborn child. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store locked up. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Store at temperatures between 2°C/35.6°F and 8°C/46.4°F.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Amikacin base

Hand protection	Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is 'UKCA'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges suitable for intended use should be used. Full face mask respirators with replaceable filter cartridges suitable for intended use should be used. Half mask and quarter mask respirators with replaceable filter cartridges suitable for intended use should be used.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Crystalline powder.
Colour	White.
Odour	Not known.
Odour threshold	No information available.
pH	pH (diluted solution): 9.5-11.5
Melting point	214°C/417.2°F
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	< 0.0000001 kPa @ 25°C/77°F
Vapour density	No information available.
Relative density	1.6 g/cm ³
Solubility(ies)	Slightly soluble in water. Slightly soluble in the following materials: Methanol.
Partition coefficient	No information available.

Amikacin base

Auto-ignition temperature No information available.

Decomposition Temperature No information available.

9.2. Other information

Molecular weight 585.60

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.
Thermal decomposition or combustion products may include the following substances:
Harmful gases or vapours.
Carbon dioxide (CO₂).
Carbon monoxide (CO).
Oxides of: Nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Summary Based on available data the classification criteria are not met.

Acute toxicity - dermal

Summary Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Summary Based on available data the classification criteria are not met.

Skin corrosion/irritation

Summary Based on available data the classification criteria are not met.

Serious eye damage/irritation

Summary Causes serious eye damage.

Respiratory sensitisation

Summary Based on available data the classification criteria are not met.

Skin sensitisation

Summary May cause an allergic skin reaction.

Germ cell mutagenicity

Amikacin base

Summary	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Summary	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Summary	May damage fertility or the unborn child.
<u>Specific target organ toxicity - single exposure</u>	
Summary	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
Summary	Causes damage to organs through prolonged or repeated exposure.
<u>Aspiration hazard</u>	
Summary	Not relevant. Solid.
General information	
	May damage fertility. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Temporary irritation.
Ingestion	May cause sensitisation or allergic reactions in sensitive individuals.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.
Medical considerations	Skin disorders and allergies.

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Summary Based on available data the classification criteria are not met.

Chronic aquatic toxicity

Summary Based on available data the classification criteria are not met.

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility No data available.

Amikacin base

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Amikacin base

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC50: Lethal Concentration to 50 % of a test population.
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms Eye Dam. = Serious eye damage
Repr. = Reproductive toxicity
Skin Sens. = Skin sensitisation
STOT RE = Specific target organ toxicity-repeated exposure

Classification procedures according to SI 2019 No. 720 Eye Dam. 1 - H318: STOT RE 1 - H372: Skin Sens. 1 - H317: Repr. 1B - H360: : Expert judgement.

Training advice Only trained personnel should use this material.

Revision date 10/11/2022

Revision 1

SDS number 1757

Hazard statements in full H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.