



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

Safety Data Sheet (MSDS)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

Product Name: Aldosterone **Product Number:** ALD-20260210 **Brand:** SIGALD **CAS Number:** 52-39-

1 Revision Date: 10 FEB 2026

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifiers

- Product Name: Aldosterone
- Synonyms: 11 β ,21-Dihydroxy-3,20-dioxopregn-4-en-18-al; Aldosteron
- CAS-No.: 52-39-1
- Molecular Formula: C₂₁H₂₈ O₅
- Molecular Weight: 360.44 g/mol

1.2 Details of the supplier of the safety data sheet

- Company: NEWAY SINOPHC TECH. LIMITED
- Address: RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
- Telephone: +86-021-50350029
- Fax: +86-021-50350029

1.3 Emergency telephone

- Emergency Phone #: +86-021-50350029 (CHEMTREC)

1.4 Relevant Identified Uses and Uses Advised Against

- Identified Uses: Pharmaceutical raw material for endocrinology drugs, research reagent for hormone mechanism study, fine chemical intermediate for steroid synthesis.
- Uses Advised Against: Not for human oral consumption without pharmaceutical formulation; not for unauthorized clinical use; not for cosmetic use; not for release to the natural environment.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Acute toxicity (oral, rat): Category 4 (LD₅₀ = 2000 mg/kg)
- Reproductive toxicity: Category 1B
- Target organ toxicity (repeated exposure): Category 2 (endocrine system, kidney, cardiovascular system)
- Hazard to the aquatic environment (long-term): Category 3

2.2 GHS Label Elements

- Hazard Pictograms: GHS07 (Exclamation mark), GHS08 (Health hazard), GHS09 (Environment)
- Signal Word: Danger
- Hazard Statements:
 - H302: Harmful if swallowed
 - H360: May damage fertility or the unborn child



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- H373: May cause damage to organs (endocrine system, kidney, cardiovascular system) through prolonged or repeated exposure
- H412: Harmful to aquatic life with long lasting effects
- Precautionary Statements:
 - P201: Obtain special instructions before use
 - P202: Do not handle until all safety precautions have been read and understood
 - P264: Wash skin thoroughly after handling
 - P270: Do not eat, drink or smoke when using this product
 - P273: Avoid release to the environment
 - P280: Wear protective gloves/eye protection/face protection/respiratory protection
 - P301+P312: If swallowed: Call a POISON CENTER/doctor if you feel unwell
 - P308+P313: If exposed or concerned: Get medical advice/attention
 - P391: Collect spillage
 - P405: Store locked up
 - P501: Dispose of contents/container to an approved waste disposal plant

2.3 Physical and Chemical Hazards: No physical or chemical hazards under normal use; combustible at high temperature (>300°C); decomposes when heated to melting point.

2.4 Health Hazards: Harmful if swallowed; reproductive toxicant; prolonged exposure may cause endocrine disorder, kidney function damage, hypertension and electrolyte imbalance; no skin/eye irritation in normal handling.

2.5 Environmental Hazards: Harmful to aquatic life with long-lasting effects; low biodegradability, high bioaccumulation potential in aquatic organisms and easy to disrupt aquatic endocrine system.

2.6 Other Hazards: No additional hazards identified.

SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Pure Substance
- Active Ingredient: Aldosterone (100%, CAS:52-39-1)
- No hazardous impurities present above the specified limit values.

SECTION 4: First Aid Measures

4.1 Description of First-Aid Measures

- If Inhaled: Move the victim to fresh air immediately, keep the respiratory tract unobstructed. If breathing is difficult, give oxygen and call a POISON CENTER/doctor at once.
- In Case of Skin Contact: Rinse the skin with plenty of soap and running water for at least 10 minutes. Remove contaminated clothing and wash it before reuse. No special treatment is needed if no irritation occurs.
- In Case of Eye Contact: Rinse eyes thoroughly with plenty of running water for 15 minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if worn. Consult a doctor immediately if irritation or discomfort persists.



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- If Swallowed: Do not induce vomiting. Rinse the mouth with water immediately. Call a POISON CENTER/doctor and provide the product information for medical treatment.

4.2 Most Important Symptoms and Effects

- Acute Effects: Nausea, vomiting, abdominal pain, dizziness after accidental ingestion; no obvious acute toxicity for skin and inhalation contact in short term.
- Delayed Effects: Prolonged or repeated exposure may cause hormonal imbalance, hypertension, kidney function abnormalities, electrolyte disturbance and reproductive system damage.

4.3 Indication of Immediate Medical Attention

- Immediate medical attention is required for accidental ingestion, prolonged exposure, suspected organ damage or reproductive system impact. Provide a copy of this MSDS to the attending physician.

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

- Suitable Extinguishing Media: Water spray, dry powder, foam, carbon dioxide (CO₂).
- Unsuitable Extinguishing Media: No limitations on extinguishing agents.

5.2 Special Hazards Arising from the Substance or Mixture

- The product is combustible at high temperature; burning may produce toxic fumes including carbon monoxide, carbon dioxide and small molecular hydrocarbon compounds.
- Decomposes at melting point with no toxic gas release; no explosion risk under normal use and storage conditions.

5.3 Advice for Firefighters

- Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear when fighting fires.
- Fight the fire from a safe distance; prevent the fire runoff from entering sewers, rivers and other water bodies to avoid environmental contamination.
- Avoid contact with the decomposed product after fire.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

- Wear nitrile rubber gloves, safety glasses, N95 dust mask and protective clothing when handling the spillage.
- Avoid dust formation and inhalation; ensure good ventilation in the spill area.
- Evacuate non-essential personnel from the spill site to a safe area.

6.2 Environmental Precautions

- Strictly prevent the spillage from entering soil, sewers, rivers, lakes and other natural water bodies.
- Do not discharge the spilled material directly into the environment.

6.3 Methods and Materials for Containment and Cleaning Up



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- Small Spill: Sweep up the spilled powder with a dry and clean brush/spatula, collect it in a sealed brown glass hazardous waste container for proper disposal.
- Large Spill: Contain the spillage with dry sand to prevent spread, transfer the collected powder to a sealed container by vacuum with HEPA filter for disposal; clean the spill area with ethanol and wipe dry.

6.4 **Reference to Other Sections:** For the disposal of spilled waste, see Section 13.

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling

- Handle the product in a low-temperature, well-ventilated fume hood with dust extraction equipment to avoid dust formation and inhalation.
- Wear the specified personal protective equipment (PPE) during all handling operations (see Section 8); operate quickly to reduce exposure time.
- Do not eat, drink, smoke or apply cosmetics when handling the product; wash hands and face thoroughly with soap and water after handling.
- Avoid mixing the product with strong oxidizing agents, strong acids, strong bases and organic halides.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

- Storage Conditions: Store in a low-temperature freezer at -20°C , brown glass bottle with rubber stopper, aluminum seal and vacuum packaging, protected from light and moisture.
- Storage Class: Dedicated low-temperature chemical storage area for steroid pharmaceutical raw materials.
- Incompatibilities: Strong oxidizing agents (e.g., hydrogen peroxide, potassium permanganate), strong mineral acids, strong alkalis, halogenated compounds, high temperature.
- Shelf Life: 24 months (unopened, under the specified -20°C storage conditions); 3 months after opening (stored at $2-8^{\circ}\text{C}$, sealed).
- Store locked up and separate from food, beverages, aquatic products, medical supplies and non-hazardous materials.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

- No official occupational exposure limits (OEL) for Aldosterone; set the internal workplace limit of $0.05\text{ mg}/\text{m}^3$ for airborne dust.

8.2 Exposure Controls

- Engineering Controls: Install local exhaust ventilation (LEV) and dust extraction equipment in the handling area; use low-temperature fume hood for all operations; conduct regular air quality monitoring in the workplace.
- Personal Protective Equipment (PPE):
 - Eye/Face Protection: Chemical splash goggles and face shield for all handling operations.

- o Skin Protection: Nitrile rubber gloves (thickness ≥ 0.3 mm), impermeable protective clothing, lab coat and disposable shoe covers.
- o Respiratory Protection: N95 dust mask for routine handling; powered air-purifying respirator (PAPR) for large spills or heavy dust.
- o Hand Protection: Replace gloves immediately if they are torn, punctured or contaminated; wash hands after glove removal.

SECTION 9: Physical and Chemical Properties

- Physical State: Crystalline powder
- Color: White to off-white
- Odor: Odorless
- Melting Point: 170-175°C (decomposes)
- Boiling Point: Not applicable (decomposes before boiling)
- Flammability: Combustible at high temperature ($>300^{\circ}\text{C}$)
- Flash Point: $>200^{\circ}\text{C}$ (Closed Cup)
- Autoignition Temperature: $>350^{\circ}\text{C}$
- Solubility: Slightly soluble in water; soluble in ethanol, chloroform, DMSO, acetone; slightly soluble in vegetable oils
- Density (20°C): 1.21 g/cm³ (powder)
- Optical Rotation: $+132^{\circ}$ to $+139^{\circ}$ (c=0.5, ethanol, 25°C)
- Vapor Pressure (25°C): <0.0001 hPa (negligible)
- Particle Size: 90% passing 200 mesh
- pH Value: 5.0-7.0 (0.1% suspension in water)
- Hygroscopy: Slightly hygroscopic
- Decomposition Temperature: 170°C (melting and decomposition)

SECTION 10: Stability and Reactivity

10.1 **Chemical Stability:** Stable under the recommended -20°C vacuum and dark storage conditions; decomposes at high temperature ($>170^{\circ}\text{C}$) and degrades when exposed to light and moisture for a long time.

10.2 **Possibility of Hazardous Reactions:** No hazardous reactions occur under normal use and handling conditions.

10.3 **Conditions to Avoid:** High temperature, direct sunlight, moisture, contact with strong oxidizing agents, strong acids and strong bases, long-term exposure to air.

10.4 **Incompatible Materials:** Strong oxidizing agents, concentrated sulfuric acid, concentrated sodium hydroxide, chlorine-containing compounds, bromine-

10.5 **Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide and small molecular hydrocarbons when burned; no toxic decomposition products under normal storage conditions.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

- Acute Toxicity: Oral (rat) LD₅₀ = 2000 mg/kg (harmful); Dermal (rabbit) LD₅₀ >5000 mg/kg (no acute dermal toxicity); Inhalation (rat) LC₅₀ >5 mg/m³ (4-hour exposure).
- Skin Corrosion/Irritation: No skin irritation (rabbit, 4-hour exposure test).
- Serious Eye Damage/Eye Irritation: No eye irritation (rabbit, 24-hour exposure test).
- Reproductive Toxicity: Category 1B; animal tests show it may cause fetal development abnormalities, reduced fertility in males and females and reproductive system damage.
- Target Organ Toxicity (Repeated Exposure): May cause endocrine system disorder, kidney function abnormalities, hypertension, electrolyte imbalance and cardiovascular system damage after prolonged exposure.
- Carcinogenicity: Not classified as a carcinogen by IARC, EPA or NTP.
- Mutagenicity: No mutagenic effects observed in standard in vitro and in vivo tests.

SECTION 12: Ecological Information

12.1 **Toxicity:** Harmful to aquatic organisms; Zebrafish LC₅₀ (96h) = 2.8 mg/L; Daphnia EC₅₀ (48h) = 2.1 mg/L. 12.2 **Persistence and Degradability:** Low biodegradability (BOD₅ /COD <0.2); persists in aquatic and soil environments for more than 6 months.

12.3 ****Bioaccumulative Potential**:** High bioaccumulation factor (BCF >1600) in aquatic organisms, easy to accumulate in fatty tissues and disrupt endocrine system. 12.4 **Mobility in Soil:** Low mobility; binds strongly to soil organic matter and is not easy to migrate with water.

12.5 **PBT and vPvB Assessment:** Classified as vPvB (very persistent, very bioaccumulative) based on test data. 12.6

Other Adverse Effects: Disrupts the endocrine system of aquatic organisms, may cause reproductive dysfunction, electrolyte imbalance and population decline of sensitive aquatic species.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

- Product Waste: Do not discharge to the environment. Dispose of the unused product and contaminated waste to a licensed hazardous waste treatment facility in accordance with local, national and international regulations.
- Packaging Waste: Rinse the empty brown glass packaging with a small amount of ethanol, collect the rinse liquid as hazardous waste; dispose of the empty packaging as hazardous waste after drying.
- Spillage Residue: Collect all contaminated materials as hazardous waste, do not mix with non-hazardous waste; do not discard the contaminated cleaning waste at will.

13.2 **Disposal Notes:** Incineration must be carried out in a hazardous waste incinerator with a gas treatment system to remove toxic fumes; do not landfill the untreated waste; low-temperature storage is required for the waste before disposal.

SECTION 14: Transport Information

14.1 **UN Number:** UN 3077 (Environmentally hazardous substance, solid, n.o.s.) 14.2 **UN Proper**

Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Aldosterone) 14.3 **Transport**



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Hazard Class: 9 (Miscellaneous dangerous goods)14.4 **Packaging Group:** III14.5 **Environmental**

Hazards: Marine Pollutant (Yes); ADR/RID/IMDG/IATA: Class 9, environmentally hazardous.14.6

Special Precautions for User

- Transport the product in sealed brown glass vacuum packaging, use professional cold chain transport at -20°C with insulated and shockproof packaging.
- Avoid direct sunlight, high temperature, collision and rough handling during transport; the transport temperature must not exceed 0°C.
- Do not transport with food, beverages, aquatic products, medical supplies, non-hazardous goods and strong oxidizing agents.
- Accompany with complete transport documents indicating the UN number, hazard class, cold chain requirements and emergency contact information.

14.7 **IATA Restrictions:** Permitted for air transport (cargo only), limited quantity per package (≤ 1 kg); no transport on passenger aircraft; cold chain air transport is required.

SECTION 15: Regulatory Information

15.1 National Regulations (China)

- Hazardous Chemical Safety Management Regulation: Classified as Class 9 hazardous chemical.
- Environmental Protection Law: Prohibited from discharge to water, soil and atmospheric environment.
- Pharmaceutical Administration Law: Regulated as a pharmaceutical raw material, subject to special production and use licensing.
- Occupational Disease Prevention and Control Law: Require workplace low-temperature operation, exposure monitoring and employee health checks for long-term handlers.

15.2 International Regulations

- GHS Classification (Rev.9): Acute toxicity 4, Reproductive toxicity 1B, Target organ toxicity 2, Aquatic chronic 3.
- REACH (EU): Registered under REACH; listed in Annex XVII (restrictions on reproductive toxicants).
- TSCA (US): Listed on the TSCA Inventory; subject to EPA hazardous waste and environmental regulations.
- IMDG Code: Class 9, UN 3077, Marine Pollutant, Packaging Group III, cold chain transport required.

SECTION 16: Other Information

- This MSDS is based on current scientific and regulatory knowledge, complying with GB/T 16483, GB/T 17519 and GHS Rev.9 standards.
- The supplier is not liable for any damage, injury or environmental pollution caused by improper use, storage, transport or disposal of this product, especially non-compliance with low-temperature storage requirements.



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- This document is for professional use by trained personnel only; not for general consumer distribution or use.
- This is the first revision of this MSDS, issued on 10 FEB 2026; it will be updated in a timely manner with the latest scientific and regulatory information.

