



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: Quinine Dihydrochloride **CAS-No.:** 60-93-5 **Product Number:** QDH-20260220 **Brand:** SIGALD **Revision Date:** 20 FEB 2026

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

1.1 Product Identifiers

- Synonyms: (8S,9R)-6'-Methoxycinchonan-9-ol dihydrochloride; Chinin dihydrochloride

Supplier Details

- Company: NEWAY SINOPHC TECH. LIMITED
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- **Emergency telephone:** +86-021-50350029 (CHEMTREC)

1.4 Identified Uses & Uses Advised Against

- Identified Uses: Pharmaceutical raw material (anti-malarial); anti-protozoal drug synthesis; biomedical research reagent; veterinary anti-parasitic formulation.
- Uses Advised Against: Not for direct oral/parenteral use (unformulated); no unapproved industrial/cosmetic/food use.

SECTION 2: Hazards Identification

2.1 **GHS Classification:** Acute oral toxicity, Category 4 (H302); Eye irritation, Category 2 (H319); Skin irritation, Category 2 (H315); Specific target organ toxicity (single exposure), Category 3 (Gastrointestinal tract) (H341)

2.2 GHS Label Elements

- Hazard Pictogram: (Warning)
- Signal Word: **Warning**
- Hazard Statements: H302 - Harmful if swallowed; H315 - Causes skin irritation; H319 - Causes serious eye irritation; H341 - Suspected of causing genetic defects
- Precautionary Statements: P264, P270, P280, P305+P351+P338, P312, P332+P313

2.3 Physical and Chemical Hazards:

No physical/chemical hazards; non-combustible

2.4 Health Hazards:

Harmful if swallowed; causes skin/serious eye irritation; suspected genotoxicity; may cause gastrointestinal discomfort, tinnitus and dizziness upon accidental high-dose ingestion.

2.5 Environmental Hazards:

Slightly toxic to aquatic organisms; fully biodegradable in natural environment; avoid direct release to water bodies.

2.6 Other Hazards:

No additional hazards identified.

SECTION 3: Composition/Information on Ingredients

- **Substance / Mixture:** Pure substance
- **Active Component:** Quinine Dihydrochloride (CAS:60-93-5) | Concentration: ≥98.5% | Classification: Acute oral toxicity Cat.4; Skin/Eye irritation Cat.2

SECTION 4: First Aid Measures

4.1 First-Aid Measures



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- Inhaled: Move to fresh air; rest in a position comfortable for breathing; consult a doctor if coughing/chest discomfort occurs.
- Skin Contact: Rinse skin with running water and mild soap for 10-15 mins; remove contaminated clothing; consult a doctor if redness/itching persists.
- Eye Contact: Rinse eyes thoroughly with running water for 15-20 mins (hold eyelids open); remove contact lenses; **immediately consult a doctor.**
- Swallowed: Rinse mouth with water; **do not induce vomiting**; immediately call a poison control center or consult a doctor.4.2 **Symptoms:** Nausea/vomiting/tinnitus (ingestion); skin redness/erythema; eye burning/tearing/blurred vision; dizziness at high exposure.4.3 **Medical Attention:** Symptomatic treatment; no specific antidote; gastric lavage under medical supervision if large amount is ingested; monitor auditory and neurological function.4.4 **Notes to Physician:** Inform of product composition and exposure/ingestion amount; check for ototoxic and neurotoxic effects.

SECTION 5: Firefighting Measures

5.1 **Extinguishing Media:** Water spray, foam, CO₂, dry powder (all suitable)5.2 **Special Hazards:**

Non-combustible; decomposes at >240°C to release toxic nitrogen oxides and hydrogen

chloride fumes.5.3 **Firefighter Advice:** Wear self-contained breathing apparatus (SCBA) and full fire-fighting gear; avoid inhalation of decomposition fumes; keep containers cool with water spray to prevent decomposition.

SECTION 6: Accidental Release Measures

6.1 **Personal Precautions:** Wear N95 dust mask, chemical safety goggles, nitrile gloves and impermeable protective clothing; ensure good ventilation.6.2 **Environmental Precautions:**

Prevent spillage from entering drains, sewers, rivers or other water bodies; contain spilled material to avoid soil contamination.6.3 **Clean Up Methods**

- Small Spill: Sweep up with a dry clean spatula; transfer to a sealed plastic container for disposal.
- Large Spill: Contain with inert material (sand/vermiculite); collect into sealed drum; rinse the area with a small amount of water (collect rinse water for disposal).6.4 **Reference:** See Section 13 for disposal.

SECTION 7: Handling and Storage

7.1 Safe Handling

- Operate in a well-ventilated fume hood/area; avoid dust generation/inhalation.
- Do not eat/drink/smoke in the work area; wash hands thoroughly with soap and water after handling.
- Avoid contact with eyes, skin and mucous membranes; wear full PPE during handling.7.2 **Safe Storage**

- Storage Conditions: Cool, dry, dark warehouse; ≤25°C, relative humidity ≤60%; airtight sealed container.



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- Incompatibilities: Strong bases, strong oxidizing agents, alkaline carbonates, heavy metal salts.
- Storage Class (TRGS 510): 10 (Toxic Solids, Non-combustible)
- Shelf Life: 24 months (unopened, under specified conditions)
- Storage Segregation: Store separately from food, feed, cosmetic raw materials and pharmaceutical APIs for human use (per hazardous chemical regulations).

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

- Occupational Exposure Limit (OEL): No official national limit; recommended TWA: 0.5 mg/m³ (inhalable dust)

8.2 Exposure Controls

- Engineering Controls: Local exhaust ventilation (LEV) for dust-generating operations; dust collection system.
- Personal Protective Equipment (PPE)
 - Eye/Face: Chemical safety goggles (mandatory)
 - Skin: Nitrile rubber gloves (≥0.18mm); impermeable protective clothing
 - Respiratory: N95/P95 dust mask for routine handling; powered air-purifying respirator (PAPR) for large-scale operations
 - Hand: Nitrile gloves (no latex/gloves with pinholes)
- Hygiene: Change contaminated clothing immediately; shower after handling; avoid touching eyes/face before hand washing.

SECTION 9: Physical and Chemical Properties

- Physical State: Crystalline powder
- Color: White to off-white
- Odor: Slightly bitter, almost odorless
- Melting Point: 235-240°C (decomposition)
- Boiling Point: N/A (decomposes before boiling)
- Flammability: Non-combustible
- Flash Point: N/A
- Autoignition Temperature: >360°C
- Solubility: Freely soluble in water/methanol; slightly soluble in ethanol; insoluble in chloroform/ether
- Density (25°C): 1.28 g/cm³
- Particle Size: 100-200 mesh (pharmaceutical grade, customizable)
- Explosive Properties: Non-explosive
- Oxidizing Properties: None
- pH Value: 2.0-3.0 (5% aqueous solution, 25°C)
- Viscosity: N/A (solid)

SECTION 10: Stability and Reactivity

10.1 **Chemical Stability:** Stable under recommended storage conditions ($\leq 25^{\circ}\text{C}$, dry, sealed). 10.2 **Hazardous Reactions:** No hazardous reactions under normal use/handling; reacts with strong bases to form insoluble quinine base. 10.3 **Conditions to Avoid:** High temperature ($>240^{\circ}\text{C}$), direct UV light, high humidity, contact with strong bases/oxidizers. 10.4 **Incompatible Materials:** Sodium hydroxide, potassium hydroxide, hydrogen peroxide, potassium permanganate, sodium carbonate. 10.5 **Decomposition Products:** Nitrogen oxides (NO_x), hydrogen chloride (HCl), carbon monoxide (CO), aromatic hydrocarbons.

SECTION 11: Toxicological Information

11.1 Toxicological Effects

- Acute Toxicity: Oral (Rat, LD_{50}) = 280 mg/kg; Dermal (Rabbit, LD_{50}) >2000 mg/kg; Inhalation (Rat, LC_{50}) >5 mg/m³ (4h)
- Skin Irritation: Moderate irritation (Rabbit, 4h exposure); redness/edema (reversible).
- Eye Irritation: Severe irritation (Rabbit, 24h exposure); corneal edema (reversible with treatment).
- Sensitization: No skin/respiratory sensitization (human/animal tests).
- Mutagenicity: Suspected genotoxicity (in vitro tests); no in vivo carcinogenicity data.
- Carcinogenicity: Not classified by IARC/EPA/NTP.
- Reproductive Toxicity: May cause fetal harm at high dosages (animal tests); avoid exposure during pregnancy/lactation.
- Target Organ Toxicity: Eyes, skin, gastrointestinal tract, auditory system; potential neurotoxicity at chronic high exposure.

SECTION 12: Ecological Information

12.1 **Toxicity:** Fish (Zebrafish, LC_{50}) = 110 mg/L (96h); Daphnia (EC_{50}) = 90 mg/L (48h); Algae (EC_{50}) = 140 mg/L (72h) 12.2 **Persistence and Degradability:** Fully biodegradable ($\text{BOD}_5/\text{COD} = 0.62$) in aquatic environments; degradation half-life = 12-20 days. 12.3

Bioaccumulative Potential: Low ($\log K_{ow} = 2.3$); no biomagnification in aquatic food chains. 12.4 **Mobility in Soil:** Moderate mobility; partially soluble in soil water; binds to soil organic matter (no leaching to groundwater). 12.5 **PBT/vPvB:** Not classified as PBT/vPvB. 12.6

Other Effects: Slightly toxic to aquatic invertebrates at high concentrations; no adverse effects on soil microorganisms.

SECTION 13: Disposal Considerations

13.1 **Waste Treatment:** Dispose via licensed hazardous chemical waste treatment facilities; incinerate at high temperature ($>800^{\circ}\text{C}$) with gas scrubbing to remove toxic fumes; **do not dispose of with ordinary waste.** 13.2 **Packaging Waste:** Rinse packaging with dilute acid then water; dispose as hazardous plastic/metal waste; do not recycle with food/cosmetic packaging.

SECTION 14: Transport Information



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14.1 **UN Number:** ADR/RID/IMDG/IATA: 2811 14.2 **UN Proper Shipping Name:** Toxic solids, organic, n.o.s. (Quinine Dihydrochloride) 14.3 **Transport Hazard Class:** 6.1 (Toxic substances) 14.4 **Packaging Group:** III 14.5 **Environmental Hazards:** IMDG: Marine pollutant (No) 14.6 **Special Precautions:** Transport at $\leq 25^{\circ}\text{C}$; avoid direct sunlight, moisture, collision and breakage of containers; store separately from food/feed/strong bases. 14.7 **Incompatible Materials:** Avoid transport with strong alkaline substances, oxidizing agents and food/feed raw materials.

SECTION 15: Regulatory Information

15.1 National & International Regulations

- China: Chinese Pharmacopoeia (CP) compliant; Hazardous Chemical Safety Management Regulation (Class 6.1 toxic substance); Pharmaceutical Raw Material Management Regulation.
 - International: GHS (Rev.9) Cat.4 Acute oral toxicity; REACH (EU) - Registered; TSCA (US) - Listed on Inventory; USP/EP/BP compliant (pharmaceutical grade).
- 15.2 **Other:** Comply with local pharmaceutical import/export, hazardous chemical transport and environmental protection regulations.

SECTION 16: Other Information

- This MSDS is based on current scientific research and complies with GB/T 16483, GB/T 17519 and GHS international standards.
- Supplier is not liable for damage caused by improper use, storage or non-compliance with safety precautions.
- Pharmaceutical grade Quinine Dihydrochloride meets CP/USP/EP quality standards; use only for formulated pharmaceutical/veterinary products.
- For further technical/safety information, contact the supplier's R&D/EHS department.

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