



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: Lidocaine Hydrochloride Revision Date: 25 FEB 2026

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

1.1 Product Identifiers

- Product Name: Lidocaine Hydrochloride
- Product Number: LH-20260225
- Brand: SIGALD
- CAS-No.: 6108-05-0
- Synonyms: 2-(Diethylamino)-N-(2,6-dimethylphenyl)acetamide hydrochloride; Lignocaine hydrochloride

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 intermediate for local anesthetic and antiarrhythmic drugs; raw material for injectable, topical, and mucosal anesthetic formulations; veterinary drug raw material for animal local anesthesia.
- Uses Advised Against: Not for direct human consumption; no non-pharmaceutical industrial use; avoid use in food/cosmetic products without professional formulation.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Acute toxicity, oral (Category 4); Skin irritation (Category 2); Serious eye irritation (Category 2); Specific target organ toxicity - single exposure (Nervous system, Category 3)

2.2 GHS Label Elements

- Hazard Pictogram: (Exclamation mark)
- Signal Word: **Warning**
- Hazard Statements:
 - H302: Harmful if swallowed
 - H315: Causes skin irritation
 - H319: Causes serious eye irritation
 - H335: May cause respiratory irritation
 - H373: May cause damage to organs (Nervous system) through prolonged or repeated exposure
- Precautionary Statements:
 - P264: Wash skin thoroughly after handling
 - P270: Do not eat, drink or smoke when using this product
 - P280: Wear protective gloves/eye protection/face protection
 - P301+P312: If swallowed: Call a POISON CENTER or doctor if you feel unwell
 - P302+P352: If on skin: Wash with plenty of water and soap
 - P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
 - P330: Rinse mouth
 - P332+P313: If skin irritation occurs: Get medical advice/attention
 - P337+P313: If eye irritation persists: Get medical advice/attention
 - P362: Take off contaminated clothing and wash before reuse
 - P405: Store locked up
 - P501: Dispose of contents/container to an approved waste disposal plant

2.3 Physical and Chemical Hazards

- Non-combustible; no explosive/oxidizing properties under normal storage and handling conditions. No hazardous polymerization will occur.

2.4 Health Hazards

- Acute: Swallowing causes nausea, dizziness, and nervous system disturbance; skin contact leads to redness, itching and mild rash; eye contact causes severe conjunctival redness,



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tearing and corneal irritation; dust inhalation may cause cough, throat discomfort and headache.

- Chronic: Prolonged exposure may cause mild neurological symptoms such as numbness and dizziness in sensitive individuals.
- Not classified as a hazardous environmental substance; low acute toxicity to aquatic organisms (96h LC₅₀ > 300 mg/L for zebrafish); low bioaccumulation potential.
- No additional hazards identified under normal use conditions.

SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: **Pure Substance**
- Active Ingredient: Lidocaine Hydrochloride (100%)
- CAS-No.: 6108-05-0
- EC-No.: N/A
- Hazardous components: 100% (Lidocaine Hydrochloride, GHS Category 4/2/2/3)

SECTION 4: First Aid Measures

4.1 Description of First-Aid Measures

- If Inhaled: Move the victim to fresh air and keep at rest in a position comfortable for breathing. If cough, dizziness or headache persists, call a doctor.
- In Case of Skin Contact: Immediately remove all contaminated clothing and shoes. Rinse skin with plenty of running water and mild soap for 10-15 minutes. If irritation or rash occurs, seek medical advice.
- In Case of Eye Contact: Hold eyelids open and rinse thoroughly with plenty of running water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek **immediate** medical advice even if irritation is mild.
- If Swallowed: Do not induce vomiting. Rinse mouth with water. Do not give anything by mouth to an unconscious person. Call a poison center or doctor immediately for large amount swallowing.

4.2 Most Important Symptoms and Effects

- Acute: Gastrointestinal discomfort, dizziness, numbness (swallowed); skin redness, pruritus (skin contact); eye redness, tearing (eye contact); respiratory irritation, headache (inhalation).
 - Delayed: Neurological numbness may occur 1-2 hours after excessive exposure; no other known delayed toxic effects.
- ### 4.3 Indication of Immediate Medical Attention
- Seek urgent medical help if large amounts are swallowed, eye contact causes persistent vision problems, inhalation causes dizziness/numbness, or skin irritation worsens.

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

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

5.2 Special Hazards Arising from the Substance

- Non-combustible; slight decomposition at high temperature (>200°C) produces low-toxic amine and aromatic hydrocarbon fumes, no toxic or explosive gases released.
 - No explosion risk under normal fire conditions.
- ### 5.3 Advice for Firefighters
- Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear only if large-scale combustion and decomposition fumes occur.
 - Prevent fire-extinguishing water from entering municipal sewers or natural water bodies (minimal aquatic impact).

SECTION 6: Accidental Release Measures

6.1 Personal Precautions

- Wear N95 dust mask, nitrile protective gloves, chemical splash goggles and disposable lab coat. Ensure good ventilation at the spill site and evacuate non-essential personnel.

6.2 Environmental Precautions

- Prevent spilled powder from entering sewers, rivers, lakes or soil. Cover the spill with inert material to avoid dust spreading.
- ### 6.3 Methods and Materials for Containment and Cleaning Up
- Small Spill: Gently sweep up with a clean dry brush, collect into a sealed plastic container for professional disposal. Do not blow or vacuum the powder to avoid dust inhalation.
 - Large Spill: Contain the spill with sand/vermiculite, transfer to a sealed HDPE drum with a label, and hand over to a licensed hazardous waste treatment company. Do not wash the spill into drains.
- ### 6.4 Reference to Other Sections
- For waste disposal, see Section 13.



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SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling

- Operate in a well-ventilated dust-free area or fume hood; avoid generating and inhaling dust during weighing and mixing.
- Wear the specified personal protective equipment (PPE) for all handling operations.
- Do not eat, drink or smoke in the work area; wash hands and face thoroughly with soap and water after handling.

- Avoid contact with strong acids, strong bases, oxidizing agents and high-temperature environments to prevent decomposition.

- Storage Conditions: Store in a cool, dry, dark and well-ventilated pharmaceutical warehouse. Temperature $\leq 25^{\circ}\text{C}$, relative humidity $\leq 60\%$. Keep the container tightly sealed to prevent hygroscopy and contamination.

- Incompatibilities: Strong acids (HCl , H_2SO_4), strong bases (NaOH , KOH), oxidizing agents (H_2O_2 , KMnO_4), heavy metal salts, strong reducing agents.

- Storage Class (TRGS 510): 10 (Non-Hazardous Solids with irritant properties)

- Shelf Life: 36 months (unopened, under the specified storage conditions).

- Segregation: Store separately from food, feed, cosmetic raw materials and other pharmaceutical intermediates with different properties; store locked up.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

- Occupational Exposure Limit (OEL): No official national/international OEL; internal control limit: 0.3 mg/m^3 (8-hour TWA).

- Biological Limit Value (BLV): N/A.

- Engineering Controls: Local exhaust ventilation (LEV) for dust-generating operations; install a dust collection and filtration system to reduce air dust concentration.

- Personal Protective Equipment (PPE):

- Eye/Face Protection: Chemical splash goggles (routine handling); goggles + face shield (large-scale weighing/mixing).

- Skin Protection: Nitrile rubber gloves (thickness $\geq 0.18 \text{ mm}$), impermeable lab coat, protective shoe covers.

- Respiratory Protection: N95 dust mask for routine operations; powered air-purifying respirator (PAPR) for high-dust operations.

- Hand Protection: Replace gloves immediately if damaged, punctured or contaminated.

SECTION 9: Physical and Chemical Properties

9.1 Basic Physical and Chemical Properties

a) Physical State: Solid (white crystalline powder)

b) Color: White to off-white

c) Odor: Practically odorless

d) Melting Point/Freezing Point: $75\text{-}79^{\circ}\text{C}$

e) Boiling Point: Not applicable (decomposes before boiling)

f) Flammability: Non-combustible

g) Flammability Limits: Not applicable

h) Flash Point: Not applicable

i) Autoignition Temperature: $> 450^{\circ}\text{C}$

j) Decomposition Temperature: $\geq 200^{\circ}\text{C}$ (mild decomposition, no hazardous byproducts)

k) pH Value: 4.0-5.5 (1% aqueous solution, 25°C)

l) Viscosity: Not applicable (solid)

m) Water Solubility: Freely soluble in water ($\approx 80 \text{ g/L}$, 25°C); soluble in ethanol, methanol; slightly soluble in acetone, ethern

n) Partition Coefficient (log P, n-octanol/water): 2.0 (25°C)

o) Vapor Pressure (25°C): $< 0.0001 \text{ hPa}$

p) Density (25°C): 1.29-1.33 g/cm^3 (bulk density)

q) Particle Size: 95% passing 80 mesh

r) Explosive Properties: Not explosives

s) Oxidizing Properties: None

t) Hygroscopy: Slightly hygroscopic

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- Acute Toxicity:
 - Oral (Rat, LD₅₀): 890 mg/kg (harmful)
 - Dermal (Rabbit, LD₅₀): > 2000 mg/kg (low dermal toxicity)
 - Inhalation (Rat, LC₅₀): > 10 mg/m³ (4-hour exposure, low inhalation toxicity)
- Skin Corrosion/Irritation: Rabbit 4-hour closed patch test - mild redness and edema (Category 2), reversible within 72 hours.
- Eye Irritation: Rabbit eye test - severe conjunctival redness and corneal opacity (Category 2), reversible with treatment within 48 hours.
- Respiratory Irritation: Rat inhalation test - mild respiratory tract irritation at high dust concentrations (≥5 mg/m³).
- Mutagenicity: Ames test, chromosome aberration test - negative; no mutagenic effects.
- Carcinogenicity: IARC Classification - Group 3 (not classifiable as to carcinogenicity to humans).
- Reproductive Toxicity: No adverse reproductive effects in animal tests at low doses (≤50 mg/kg); high doses may cause mild fetal developmental retardation in animals.
- Specific Target Organ Toxicity: Nervous system is the main target organ; high dose causes dizziness, numbness and local anesthetic effects.

SECTION 12: Ecological Information

12.1 Toxicity

- Fish (Zebrafish, 96h LC₅₀): 310 mg/L
 - Daphnia (48h EC₅₀): 290 mg/L
 - Freshwater Algae (72h EC₅₀): 350 mg/L
- 12.2 Persistence and Degradability: Biodegradable (BOD₅/COD = 0.60); degraded by microorganisms in aquatic and soil environments within 21-28 days, no persistent residues.
- 12.3 Bioaccumulative Potential: Low (log P = 2.0); no significant bioaccumulation in aquatic organisms and food chain.
- 12.4 Mobility in Soil: Low mobility; adsorbs to soil organic matter (K_{oc} = 520), no leaching risk to groundwater.
- 12.5 PBT/vPvB Assessment: Not classified as PBT/vPvB substances.
- 12.6 Other Adverse Effects: No known adverse effects on soil microorganisms and terrestrial plants at low concentrations.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

- Product Waste: Contaminated/expired product is classified as hazardous waste; must be disposed of by licensed hazardous waste treatment facilities via incineration (combustion products are non-toxic CO₂, H₂O and small amount of amine fumes).
- Packaging Waste: Rinse packaging with ethanol and water to remove residual powder, then dispose of as hazardous waste; do not recycle or reuse contaminated packaging.
- Unused Product: Do not discharge to the environment; incinerate with professional waste treatment companies in accordance with local national and international regulations.
- Disposal Compliance: Comply with national and local hazardous waste disposal regulations (e.g., China HW02, EU EWC 080105).

SECTION 14: Transport Information

14.1 UN Number: ADR/RID: 3077; IMDG: 3077; IATA-DGR: 3077

14.2 UN Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Lidocaine Hydrochloride)

14.3 Transport Hazard Class: 9 (Miscellaneous hazardous substances and articles)

14.4 Packaging Group: III (Minor hazard)

14.5 Environmental Hazards: IMDG Marine Pollutant: **No**

14.6 Special Precautions for Transport

- Transport in sealed HDPE pharmaceutical-grade drums with inner plastic lining or aluminum foil vacuum bags; affix standard Class 9 hazard labels and product identification labels.
- Transport temperature ≤ 30°C; avoid direct sunlight, rain, collision, extrusion and rough handling during transport.
- Do not transport with food, feed, cosmetics, aquatic products and oral pharmaceutical finished products.
- Comply with ADR/RID, IMDG Code and IATA-DGR transport regulations for Class 9 hazardous substances; transport by specialized hazardous chemical vehicles for bulk shipment.

SECTION 15: Regulatory Information

15.1 National/International Regulations

- China: Hazardous Chemicals Safety Management Regulation (Class 9 hazardous chemical); Pharmaceutical Raw Material Registration Requirements for medical intermediates; Chinese Pharmacopoeia (CP) 2025 edition compliance.
- EU: REACH (Annex XVII compliant; not in SVHC Candidate List); CLP (GHS classification as Warning); European Pharmacopoeia (EP) 10.0 compliance; IMDG Code (Class 9).
- US: TSCA (listed on the TSCA Inventory); DOT (Class 9 hazardous material); FDA (compliant with pharmaceutical intermediate quality standards); United States Pharmacopoeia (USP) 47 compliance.
- Japan: JP 17 compliance; Japanese Pharmaceutical Affairs Law.
- Other: Comply with local pharmaceutical raw material import/export registration and hazardous chemical transport regulations of the destination country.15.2 Additional Regulatory Requirements
- Provide English MSDS and COA for customs clearance; apply for a hazardous chemical transport document for bulk shipment; provide product quality test reports and pharmacopoeia compliance certificates for pharmaceutical production use.

SECTION 16: Other Information

- Further Information: This MSDS is based on current scientific and regulatory knowledge, complying with GB/T 16483, GB/T 17519 and GHS Rev.9 standards. It is for occupational health and safety use only for professional operators and transport personnel.
- Revision Date: 25 FEB 2026
- Disclaimer: The supplier is not liable for any damage caused by improper use, storage, transport or disposal of this product beyond the scope of the specified standards and national/international regulations.