



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)

SECTION 1: Identification

1.1 Product Identifiers

- Product Name: Sodium Formate
- Product Number: SF-20260228
- Brand: SIGALD
- CAS-No.: 141-53-7

Synonyms: Formic acid sodium salt; Sodium methanoate

1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
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- Telephone : +86-021-50350029
- Fax : +86-021-50350029

1.3 Emergency telephone

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

1.4 Uses & Restrictions

- **Identified Uses:** Leather tanning agent, concrete early strength agent, antifreeze fluid additive, chemical synthesis intermediate, oilfield drilling fluid modifier, dyeing auxiliaries
- **Uses Advised Against:** Mixing with strong mineral acids without ventilation; use in high-temperature (>300°C) systems without pressure relief; not for food/cosmetic use without purification

SECTION 2: Hazards Identification

2.1 GHS Classification: Skin irritation (Category 2); Serious eye irritation (Category 2A)
2.2 GHS Label Elements

- Hazard Pictogram: GHS07 (Exclamation mark)
- Signal Word: **Warning**
- Hazard Statements: H315 (Causes skin irritation), H319 (Causes serious eye irritation)
- Precautionary Statements: P264, P280, P302+P352, P305+P351+P338, P332+P313, P337+P313
2.3 Physical/Chemical Hazards: Non-combustible; non-explosive; decomposes at >300°C to sodium carbonate, hydrogen and methane gas; reacts with strong acids to release irritating formic acid gas
2.4 Health Hazards: Mild skin irritation with prolonged contact; serious eye irritation; dust inhalation causes temporary respiratory tract irritation/cough; no acute oral/dermal toxicity
2.5 Environmental Hazards: Low aquatic toxicity; fully biodegradable; no bioaccumulation potential in soil and water; no harm to terrestrial organisms

SECTION 3: Composition/Information on Ingredients

- **Substance/Mixture:** Pure Substance



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- **Main Component:** Sodium Formate (99.3%, CAS:141-53-7)
- **Formula:** HCOONa
- **Molecular Weight:** 68.01 g/mol
- **Hazardous Ingredients:** None (hazardous only from reaction/decomposition products)

SECTION 4: First Aid Measures

- **Inhaled:** Move to fresh air, keep respiratory tract open. Drink water to soothe throat; consult a physician if coughing or irritation persists for more than 1 hour.
- **Skin Contact:** Rinse skin with running water for 5 minutes; remove contaminated clothing and wash with mild soap before reuse. Apply moisturizer if dryness/irritation occurs.
- **Eye Contact:** Hold eyelids open and rinse thoroughly with running water for 10-15 minutes; remove contact lenses if worn. Consult an ophthalmologist if redness, blurriness or irritation remains.
- **Swallowed:** Rinse mouth with water; do not induce vomiting. Seek medical advice only for large ingestions with gastrointestinal discomfort (nausea, diarrhea).

SECTION 5: Firefighting Measures

- **Suitable Extinguishing Media:** Water spray, foam, CO₂, dry powder
- **Special Hazards:** Non-combustible; decomposition at >300°C releases flammable hydrogen/methane gas; reaction with strong acids releases formic acid gas; no hazardous combustion products at normal fire temperatures
- **Firefighter Protection:** Wear standard fire-fighting gear; N95 respirator if decomposition/reaction gases are present; cool containers with water spray to prevent thermal decomposition

SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear safety goggles, nitrile gloves and N95 dust mask for large spills; ensure good ventilation; avoid dust inhalation and skin/eye contact.
- **Containment & Cleanup:** Sweep up powder with inert material (sand/vermiculite) and transfer to sealed HDPE containers; wipe small spills with damp cloth to prevent dust dispersion; dilute and flush small amounts to wastewater system per local regulations.
- **Environmental Precautions:** No special measures; product is biodegradable; prevent large undiluted spills from entering waterways (dilute with water if needed).

SECTION 7: Handling and Storage

- **Handling:** Operate in well-ventilated area; use plastic/glass equipment; avoid mixing with strong acids; wear PPE for bulk processing; avoid dust generation.
- **Storage Conditions:** Cool, dry, well-ventilated warehouse (≤30°C); store in sealed HDPE drums/bags; avoid direct sunlight, high temperature and high humidity; keep away from strong acids, oxidizers and heat sources.
- **Incompatibilities:** Strong mineral acids (HCl, H₂SO₄), strong oxidizing agents, high temperature (>300°C)



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- **Shelf Life:** 36 months (unopened, under specified storage conditions); 6 months after opening (seal tightly to prevent moisture absorption)

SECTION 8: Exposure Controls/Personal Protection

- **Occupational Exposure Limits:** No established limits (OSHA/ACGIH); formic acid (reaction product) TWA: 5 ppm (OSHA)
- **Engineering Controls:** Basic ventilation; local exhaust ventilation for bulk powder processing; fume hood if mixing with acidic materials
- **PPE:**
 - Eye/Face: Safety goggles (routine handling); face shield (bulk transfer/acid contact)
 - Skin: Nitrile gloves (bulk handling); lab coat/coverall (industrial processing)
 - Respiratory: N95 dust mask (bulk powder); chemical respirator (formic acid gas protection) if mixing with acids

SECTION 9: Physical and Chemical Properties

- Physical State: White crystalline powder/granules (25°C)
- Odor: Odorless/faint formic acid odor
- Solubility: 97 g/100mL (water, 20°C); soluble in glycerol; slightly soluble in ethanol; insoluble in ether
- pH (10% aq. solution, 25°C): 8.5 (mildly alkaline)
- Density: 1.92 g/cm³ (25°C)
- Melting Point: 254°C
- Boiling Point: Decomposes (>300°C)
- Flammability: Non-combustible
- Hygroscopy: Slightly hygroscopic
- Bulk Density: 0.8-1.0 g/cm³
- Viscosity: N/A (solid)

SECTION 10: Stability and Reactivity

- **Stability:** Chemically stable under normal storage and use conditions (≤30°C, sealed); slightly hygroscopic with no degradation; stable in neutral/alkaline media
- **Hazardous Reactions:** Reacts with strong acids to release formic acid gas; decomposes at >300°C to flammable hydrogen/methane gas and sodium carbonate
- **Decomposition Products:** Na₂CO₃, H₂, CH₄, trace CO (at >300°C)
- **Conditions to Avoid:** High temperature, direct sunlight, contact with strong acids/oxidizers

SECTION 11: Toxicological Information

- Oral LD₅₀ (Rat): >5000 mg/kg (non-toxic)
- Dermal LD₅₀ (Rabbit): >5000 mg/kg (mild skin irritation only)
- Inhalation LC₅₀ (Rat): >5 mg/m³/4h (dust, mild respiratory irritation)
- Skin Irritation: Category 2 (mild, reversible irritation; Rabbit, 4h exposure)
- Eye Irritation: Category 2A (serious reversible irritation; Rabbit, 24h exposure)



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- Carcinogenicity: IARC Group 3 (Unclassifiable); no mutagenic/reproductive toxic effects

SECTION 12: Ecological Information

- Aquatic Toxicity (Zebrafish LC₅₀): >2000 mg/L/96h (low toxicity)
- Aquatic Toxicity (Daphnia EC₅₀): >1500 mg/L/48h (low toxicity)
- Persistence: Fully biodegradable (formate ion degraded by microbes; BOD₅ /COD >0.6)
- Bioaccumulative Potential: None (log K_{oc}: 0.9; no biomagnification in food chain)
- Environmental Fate: Dissociates into formate and Na⁺ in water; formate biodegrades to CO₂ and water; Na⁺ is a natural inorganic ion with no environmental impact

SECTION 13: Disposal Considerations

- **Product Waste:** Dispose via licensed waste treatment facilities; dilute with water and discharge to biological wastewater treatment systems (per local regulations); unspoiled product can be recycled for industrial use.
- **Packaging Waste:** Rinse thoroughly with water; recycle as non-hazardous plastic waste; no special disposal required.
- **Contaminated Material:** All cleanup materials are non-hazardous; dispose as ordinary industrial waste.

SECTION 14: Transport Information

- UN Number: Not dangerous goods
- Transport Hazard Class/Packaging Group: N/A
- Marine Pollutant: No
- **Precautions:** Transport by ordinary vehicles; avoid collision, leakage, direct sunlight and high temperature; keep sealed; do not transport with strong acids/oxidizers.

SECTION 15: Regulatory Information

- Complies with GHS, REACH, TSCA, GB 13690-2009 (China); not classified as a hazardous chemical
- EU SVHC: Not listed; meets industrial chemical regulatory standards
- Labeling: Mandatory GHS07 hazard label; no other special labeling requirements

SECTION 16: Other Information

- **Revision Date:** 28 FEB 2026
- **Notes:** Avoid mixing with strong acids to prevent formic acid gas release; test moisture content before use if stored beyond 12 months; use dust collection system for bulk processing.