



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: Calcium Formate
- Product Number: CAF-20260214
- Brand: SIGALD
- CAS-No.: 544-17-2

Synonyms: Calcium diformate; Formic acid calcium salt

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

- Identified Uses: Concrete early strength agent, animal feed additive (calcium source/acidifier), food additive (preservative), leather tanning, chemical synthesis intermediate.
- Uses Advised Against: Avoid mixing with strong acids (releases formic acid); not for excessive use in feed/food (comply with dosage limits).

SECTION 2: Hazards Identification

2.1 GHS Classification: Eye irritation (Category 2A); Skin irritation (Category 2)
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, P305+P351+P338, P337+P313
- 2.3 Physical/Chemical Hazards: Non-combustible; reacts with strong acids to release formic acid gas; decomposes at >300°C to form calcium carbonate and methane; no explosive risks.
- 2.4 Health Hazards: Mild skin/eye irritation; no acute toxicity; inhalation of powder may cause temporary cough/respiratory irritation.
- 2.5 Environmental Hazards: Low aquatic toxicity; biodegradable (formate ion); no environmental persistence.

SECTION 3: Composition

- Substance / Mixture: Pure Substance
- Formula: $\text{Ca}(\text{HCOO})_2$
- Molecular Weight: 130.11 g/mol



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- Concentration: $\geq 98.0\%$ ($\text{Ca}(\text{HCOO})_2$)
- Hazardous Ingredients: None

SECTION 4: First Aid Measures

- Inhaled: Move to fresh air. If coughing persists, drink water to soothe throat and consult a doctor if needed.
- Skin Contact: Rinse skin with running water for 5 minutes; remove contaminated clothing and wash before reuse.
- Eye Contact: Rinse with plenty of water for 10–15 minutes (hold eyelids open). Consult a doctor if irritation remains.
- Swallowed: Rinse mouth with water; no special treatment needed (non-toxic). Seek medical advice only if large amounts are ingested (may cause mild gastrointestinal discomfort).

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Water spray, foam, CO_2 , dry powder.
- Special Hazards: Non-combustible; decomposes at $>300^\circ\text{C}$ to release methane (flammable gas); reacts with fire-fighting water (if acidic) to release formic acid gas.
- Firefighter Protection: Wear standard fire-fighting gear; avoid inhalation of decomposition fumes/formic acid gas.

SECTION 6: Accidental Release Measures

- Personal Precautions: Wear nitrile gloves, safety goggles and dust mask for large spills (avoid powder inhalation).
- Cleanup Methods: Sweep up with inert materials (sand/vermiculite) and transfer to sealed HDPE containers; small spills can be dissolved in water and flushed to wastewater system (per local regulations).
- Environmental Precautions: Prevent runoff into waterways for large spills (formate ion is biodegradable, low risk).

SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated area; avoid dust inhalation and skin/eye contact; do not mix with strong acids (formic acid gas release).
- Storage Conditions: Cool, dry, well-ventilated warehouse ($\leq 30^\circ\text{C}$); keep sealed in moisture-proof packaging; avoid direct sunlight and high temperature ($>300^\circ\text{C}$).
- Incompatibilities: Strong acids ($\text{HCl}/\text{H}_2\text{SO}_4$), strong oxidizing agents, concentrated mineral acids.
- Shelf Life: 36 months (unopened, under specified conditions).

SECTION 8: Exposure Controls/Personal Protection

- PPE: Nitrile gloves, safety goggles for routine handling; N95 dust mask for bulk powder operations; lab coat for industrial use.
- Engineering Controls: Basic ventilation; dust collection system for large-scale powder processing; fume hood for acid contact operations.
- Occupational Exposure Limits: No established limits (non-toxic, low irritation).



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SECTION 9: Physical and Chemical Properties

- Physical State: Crystalline powder/granules (25°C)
- Color: White to off-white
- Odor: Odorless/faint formic acid odor
- Solubility: Soluble in water (16.6 g/100mL at 20°C), slightly soluble in methanol/ethanol
- pH: 6.5–8.0 (5% aq. solution, 25°C)
- Density (25°C): 2.02 g/cm³
- Melting Point: Decomposes (>300°C)
- Flammability: Non-combustible
- Hygroscopy: Slightly hygroscopic

SECTION 10: Stability and Reactivity

- Stable under normal storage/use conditions (≤30°C, sealed); slightly hygroscopic but no chemical degradation.
- Reacts with strong acids to release formic acid gas; decomposes at >300°C to CaCO₃ and CH₄.
- No hazardous reactions under normal use; incompatible with strong acids and oxidizing agents.
- Hazardous Decomposition Products: Methane (flammable), formic acid gas (irritant) (only at high temperature/acid contact).

SECTION 11: Toxicological Information

- Oral LD₅₀ (Rat): >5000 mg/kg (non-toxic)
- Dermal LD₅₀ (Rabbit): >5000 mg/kg (non-toxic)
- Skin Irritation: Mild (Rabbit, 4h exposure, reversible)
- Eye Irritation: Moderate (Rabbit, 24h exposure, reversible)
- No mutagenic/carcinogenic/reproductive toxic effects reported; approved for feed/food use (FDA/EU/China standards).

SECTION 12: Ecological Information

- Aquatic Toxicity (Zebrafish LC₅₀): >2000 mg/L (96h)
- Persistence and Degradability: Formate ion fully biodegradable (100% degradation in 14 days via microbial action); calcium ion is natural mineral.
- Bioaccumulative Potential: None (no bioaccumulation in aquatic/terrestrial organisms)
- Environmental Fate: Dissolves in water (formate/Ca²⁺); formate degrades to CO₂ and water; Ca²⁺ precipitates as carbonate in natural water.

SECTION 13: Disposal Considerations

- Product Waste: Dispose via licensed waste facilities; or dilute with water and discharge to biological wastewater treatment systems (per local regulations); recyclable as feed additive (if unspoiled).
- Packaging Waste: Rinse with water, recycle as plastic/ paper waste (non-hazardous).

SECTION 14: Transport Information

- UN Number: Not dangerous goods



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- Transport Hazard Class: -
- Packaging Group: -
- Marine Pollutant: No
- Special Precautions: Avoid moisture, collision and high temperature during transport; keep sealed; do not transport with strong acids.

SECTION 15: Regulatory Information

- Complies with GHS, REACH, TSCA, FDA (feed/food grade), EU Feed Additive Regulation, GB 1886.221-2016 (China food standard).
- Not listed as a hazardous chemical; no EU SVHC classification; feed grade complies with FEDIOL standards.

SECTION 16: Other Information

- Revision Date: 14 FEB 2026
- This MSDS is based on industrial/feed/food grade calcium formate (all grades have the same hazard profile).



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