



# 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)

(Complies with GB/T 16483, GB/T 17519; Adapts to GHS Rev.9, IMDG, IATA

Standards)**Product Name:** Sodium Cyclamate (Food Grade, Anhydrous)**Revision Date:**  
26 FEB 2026

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

### 1.1 Product Identifiers

- Product Name: Sodium Cyclamate (Food Grade, Anhydrous)
- Product No.: CYC-20260228
- Brand: SIGALD
- CAS-No.: 139-05-9
- Synonyms: Sodium cyclohexanesulfamate; Sodium N-cyclohexylsulfamate; Food Grade Sodium Cyclamate; 环己基氨基磺酸钠（无水食品级）/ 甜蜜素

### 1.2 Supplier Details

- 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 Cooperative Line)

### 1.4 Identified Uses & Uses Advised Against

- **Identified Uses:** Food additive (low-calorie high-intensity sweetener, flavor modifier, bitterness masking agent); raw material for low-sugar/zero-sugar food, beverage, dairy, confectionery, seasoning, pickled food; food processing auxiliary material.
- **Uses Advised Against:** Avoid excessive addition beyond national standard limits; avoid use in infant food (0-12 months); no other restricted uses for food grade when used in compliance with dosage standards.

## SECTION 2: Hazards Identification

### 2.1 GHS Classification

Not a hazardous substance or mixture (GHS 0 Category)

### 2.2 GHS Label Elements

- Hazard Pictogram: None
- Signal Word: None
- Hazard Statements: None
- Precautionary Statements: P261, P271, P302+P352, P405, P501

### 2.3 Hazard Summary

White crystalline powder/granule, odorless, mild sweet taste (relative sweetness  $\approx 30-50$  times sucrose). **Non-toxic, non-irritating** under normal food use conditions; no skin/eye/respiratory irritation, no acute/chronic toxicity for normal population when used in compliance with dosage limits. Excessive oral ingestion may cause mild gastrointestinal discomfort (bloating, diarrhea) in sensitive individuals (no long-term harm). High temperature/acid stable, non-combustible, no explosion risk; low-calorie, almost no energy metabolism in human body. Environmentally friendly, fully biodegradable; strict control of cyclohexylamine impurity (hazardous at high concentration) in food grade product.

## 2.4 Physical & Chemical Hazards

No physical/chemical hazards under normal storage/use; non-combustible, no decomposition at common food processing temperature ( $<200^{\circ}\text{C}$ ); stable in acidic/alkaline food systems (pH 2.0-10.0); highly soluble in water, non-hygroscopic (good anti-caking performance); no reaction with common food additives.

## 2.5 Health Hazards

No acute/chronic toxic effects for normal population at food intake dosages (FAO/WHO, CFDA/FDA certified); no sensitization, mutagenicity, carcinogenicity or reproductive toxicity; low-calorie, no blood sugar/insulin fluctuation (suitable for diabetics/obese people). **Key Notes:** ① Excessive ingestion may cause mild gastrointestinal discomfort in sensitive individuals; ② Food grade product strictly limits cyclohexylamine impurity ( $\leq 0.001\%$ ) to avoid toxic risk; ③ Not recommended for infant food due to immature digestive system.

## 2.6 Environmental Hazards

No adverse effects on aquatic/terrestrial organisms at normal concentrations; fully biodegradable ( $\text{BOD}_5/\text{COD} > 0.90$ ) by microorganisms; no bioaccumulation potential, no eutrophication risk; decomposes into non-toxic small molecules in natural environment, no residual pollution; cyclohexylamine impurity content is extremely low, no environmental hazard.

## SECTION 3: Composition/Information on Ingredients

- **Substance Type:** Pure sulfamate organic salt (synthetic food-grade high-intensity sweetener)

### 3.1 Main Component

表格

Component	Content (w/w)	CAS No.	Formula
Sodium Cyclamate (Anhydrous)	$\geq 99.0\%$	139-05-9	$\text{C}_6\text{H}_{12}\text{NNaO}_3\text{S}$

### 3.2 Impurity & Auxiliary Ingredients (All Non-Hazardous)

- Cyclohexylamine (strict limit):  $\leq 0.001\%$  (130-89-2)



## 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>

- Food-grade anticaking agent (Silicon Dioxide):  $\leq 0.5\%$  (trace)
- Deionized water (trace):  $\leq 1.0\%$
- **Total Hazardous Ingredients:** 0%
- **Key Impurity Note:** Cyclohexylamine content is controlled to the lowest food safety standard to eliminate toxic risk.

### SECTION 4: First Aid Measures

#### 4.1 First-Aid for Different Exposure Routes

- **If Inhaled:** Move to fresh air if slight dust discomfort occurs; no special treatment needed (no respiratory irritation, dust expels spontaneously).
- **In Case of Skin Contact:** Rinse skin with running water for 3-5 minutes if needed; no irritation, no residual effect, no emollients required.
- **In Case of Eye Contact:** Rinse eyes with plenty of clean water for 5 minutes (hold eyes open) if powder/granule enters; no eye damage/irritation, no long-term effect.
- **If Swallowed:** Normal ingestion (food dosage) is safe for all population (excluding infants); rinse mouth with water and drink warm water if excessive ingestion causes mild gastrointestinal discomfort (bloating/diarrhea). No induced vomiting required – symptoms disappear spontaneously within 24h.

#### 4.2 Most Important Symptoms & Effects

Only mild, temporary gastrointestinal discomfort (bloating, diarrhea) in sensitive individuals with excessive one-time ingestion; no acute toxic symptoms, no long-term health hazards for normal population.

#### 4.3 Medical Attention Note

No specific treatment for any exposure under normal use; consult a doctor only if gastrointestinal discomfort persists for more than 48h (extremely rare); inform doctor of the ingredient if necessary (no specific antidote required).

### SECTION 5: Firefighting Measures

#### 5.1 Suitable Extinguishing Media

Water spray, foam, carbon dioxide (CO<sub>2</sub>), dry chemical powder - all applicable with no limitations; water spray is preferred for cooling (no combustion risk).

#### 5.2 Special Hazards from the Substance

**Non-combustible;** no combustion, no explosive gases, no toxic fumes at common fire temperature; decomposes only at ultra-high temperature (>300°C) to produce trace non-toxic sulfide and cyclohexane derivatives; no secondary hazards, no burning residues.

#### 5.3 Advice for Firefighters

Wear standard fire-fighting protective gear (gloves, goggles) for personal protection; no special fire-fighting measures required (no combustion risk);

ensure good ventilation at fire scene; cool surrounding containers with water to prevent physical damage.

### SECTION 6: Accidental Release Measures

#### 6.1 Personal Precautions

Wear non-slip shoes for large spills (granule/powder may cause slippery floors); FFP1 dust mask is optional for heavy dust generation (no irritation risk); no other PPE required for normal spills.

#### 6.2 Environmental Precautions

No special environmental measures; the product is biodegradable and non-polluting; sweep up spilled powder/granule to avoid direct entry into drinking water sources (no environmental risk if entered, rapidly degraded by microorganisms).

#### 6.3 Containment & Cleaning Up

- **Small Spill:** Gently sweep up with a brush, collect in a sealed plastic container for reuse; wipe the floor with a dry/damp cloth to prevent slipping and dust resuspension.
- **Large Spill:** Contain with plastic barriers to prevent spread; transfer to sealed HDPE drums for recycling/disposal; clean the area with a mop and dry thoroughly (no caking risk due to non-hygroscopicity).

#### 6.4 Disposal Reference

See Section 13 for waste disposal requirements.

### SECTION 7: Handling and Storage

#### 7.1 Safe Handling Precautions

- Operate in a well-ventilated area; use low-speed mixing during bulk blending/transfer to avoid dust dispersion (no toxic dust risk); no special temperature control for processing (stable at all food processing temperatures).
- **Critical:** Strictly follow national food additive dosage standards (GB 2760-2021) for addition; avoid excessive use; do not add to infant food (0-12 months).
- **Hygiene Measures:** Wash hands with soap and water after handling; do not eat/drink/smoke while operating the product; no special cleaning requirements for equipment (easily soluble in water, no residue).

#### 7.2 Safe Storage Conditions

- **Storage:** Cool, dry, well-ventilated food-grade warehouse; keep container tightly sealed to prevent contamination (no moisture absorption/caking risk due to non-hygroscopicity).
- **Temperature & Humidity:** Storage temp  $\leq 30^{\circ}\text{C}$  (no strict limit, stable at room temperature); relative humidity  $\leq 75\%$  (no caking even at high humidity); no need for dehumidification equipment (cost-saving for storage).

- **Incompatibilities:** No incompatible materials; compatible with all common food additives (sucrose, erythritol, aspartame, acidulants, preservatives, emulsifiers); can be mixed with any sweetener/food raw material.
- **Storage Class:** TRGS 510 Class 13 (Non-Hazardous Solids)
- **Shelf Life:** 36 months (unopened, specified conditions); 24 months after opening (seal tightly, normal room temperature storage) – long shelf life due to non-hygroscopicity and high stability.
- **Labeling Requirement:** Mark storage area/container with "**Food Grade - Strictly Follow Dosage Limits - Not for Infant Food**".

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Occupational Exposure Limits

No specific OEL for food-grade Sodium Cyclamate; follow general food additive dust exposure limit (TWA 10 mg/m<sup>3</sup>) for bulk processing only.

### 8.2 Exposure Controls & PPE

- **Engineering Controls:** Local exhaust ventilation (LEV) for large-scale powder processing (to reduce dust); no temperature/ humidity control required for production area (stable product performance); ordinary food processing equipment is applicable.
- **Personal Protective Equipment:**
  - Eye/Face: Safety goggles with side shields (optional for bulk handling, only to prevent powder from entering eyes).
  - Skin: Nitrile rubber gloves (food grade, ≥0.11mm) for prolonged contact (optional, no skin irritation).
  - Respiratory: FFP1 dust mask for bulk powder processing (only to prevent dust inhalation, no toxic risk); no respiratory protection for small-scale use.
  - Foot: Non-slip food-grade safety shoes (mandatory for all handling to prevent slipping from spilled powder/granule).
  - Hygiene: Food-grade hand washing facilities with pure water and soap at the workplace; no special skin care required after contact.

## SECTION 9: Physical and Chemical Properties

a) Physical State: White crystalline powder/crystalline granule  
b) Color: White, no yellowing or discoloration even at high temperature  
c) Odor: Odorless  
d) Taste: Mild, clean sweet taste, no bitter aftertaste/metallic taste, relative sweetness ≈30–50× sucrose (1% aqueous solution)  
e) Melting Point: N/A (decomposes at >300°C, no melting)  
f) Boiling Point: N/A (decomposes before boiling)  
g) Flammability: Non-combustible (no flash point, no autoignition temperature)  
h) Flash Point: Not applicable (non-combustible)  
i) Autoignition Temperature: Not applicable (non-combustible)  
j) pH Value (25°C, 10% aq. solution): 5.5–7.5 (neutral)  
k) Solubility: Freely soluble in water (≈200 g/L at 25°C); slightly

soluble in ethanol ( $\approx 1$  g/L); insoluble in ether/chloroform/benzene) Density (25°C, solid): 1.60 g/cm<sup>3</sup> Bulk Density: 0.8-1.2 g/cm<sup>3</sup> (varies with particle size, granule type has higher bulk density) n) Hygroscopy: Non-hygroscopic (no moisture absorption, no caking at RH<80%) o) Vapor Pressure (25°C): Negligible (<0.00001 hPa) p) Viscosity: 1.05 mPa·s (10% aqueous solution, 25°C); N/A for solid q) Partition Coefficient (log Kow): -3.8 (highly hydrophilic) r) Explosive Properties: Not explosive (no explosion risk under any normal condition) s) Oxidizing Properties: None (no oxidizing/reducing properties)

## SECTION 10: Stability and Reactivity

### 10.1 Chemical Stability

**Extremely stable** under all normal storage/use conditions; stable in acidic/alkaline food systems (pH 2.0-10.0) (suitable for pickled food, carbonated beverage with low pH); stable at all common food processing temperatures (<200°C) (baking, boiling, sterilization); no hydrolysis, no decomposition, no loss of sweetness.

### 10.2 Hazardous Reactions

No hazardous reactions under any food production/use condition; no polymerization, no decomposition, no reaction with acids, alkalis, oxidants, reductants or common food additives; ultra-high temperature (>300°C) decomposition produces only non-toxic small molecules (no dangerous by-products).

### 10.3 Conditions to Avoid

No **special conditions to avoid** (extremely stable); only need to follow dosage limits and avoid use in infant food (no performance-related restrictions).

### 10.4 Incompatible Materials

No **incompatible materials**; compatible with all food additives, food raw materials, metal/non-metal processing equipment (no corrosion, no reaction).

### 10.5 Hazardous Decomposition Products

Only trace non-toxic cyclohexane derivatives, sodium sulfide and carbon dioxide at ultra-high temperature (>300°C); no hazardous decomposition products under normal food storage/use conditions (the most stable high-intensity sweetener).

## SECTION 11: Toxicological Information

### 11.1 Key Toxicological Effects

- **Acute Toxicity:** Oral (Rat, LD<sub>50</sub>) >10,000 mg/kg (practically non-toxic); Dermal (Rabbit, LD<sub>50</sub>) >20,000 mg/kg; Inhalation (Rat, LC<sub>50</sub>) >50 mg/m<sup>3</sup> (4h).
- **Skin/Eye Irritation:** No irritation (Rabbit test, 24h continuous exposure); no corrosivity, no allergic reaction.
- **Sensitization:** No skin/respiratory sensitization (long-term human/animal use data, FAO/WHO certified); no allergic reaction in any population.

- **Mutagenicity/Carcinogenicity:** No mutagenic effects (Ames test, chromosome aberration test); IARC Class 3 (not classifiable as carcinogenic to humans); FDA/CFDA GRAS certified (no carcinogenic risk).
- **Reproductive Toxicity:** No adverse reproductive/developmental effects in animal tests; safe for pregnant/lactating women and children ( $\geq 1$  year old) at food dosages.
- **Target Organ Toxicity:** No target organ toxicity for normal population; almost no metabolism in the human body (90% excreted unchanged in urine), low-calorie (no energy intake), no blood sugar/insulin impact.
- **Aspiration Hazard:** Low (crystalline powder/granule, moderate bulk density, no aspiration risk); non-hygroscopic, no dust agglomeration.

### 11.2 Additional Information

Approved by FAO/WHO/Codex Alimentarius, ADI: 0–11 mg/kg body weight; the most stable high-intensity sweetener with mild sweet taste; strict control of cyclohexylamine impurity in food grade product; widely used in global food industry with proven long-term safety for normal population ( $\geq 1$  year old).

## SECTION 12: Ecological Information

### 12.1 Ecotoxicity

- Fish (Zebrafish,  $LC_{50}$ ):  $>50,000$  mg/L (96h)
- Daphnia ( $EC_{50}$ ):  $>30,000$  mg/L (48h)
- Algae ( $EC_{50}$ ):  $>50,000$  mg/L (72h) No toxic effects on aquatic organisms at any normal concentration; non-toxic to soil microorganisms, plants and terrestrial animals; cyclohexylamine impurity content is extremely low, no ecological toxicity.

### 12.2 Persistence & Degradability

Fully biodegradable ( $BOD_5/COD > 0.90$ ) in aquatic/soil environments; degraded by microorganisms (sulfamate-degrading bacteria) into cyclohexane, ammonia, sodium sulfate and carbon dioxide within 7–10 days; further decomposed into non-toxic small molecules; no residual pollution, no persistent organic pollutants.

### 12.3 Bioaccumulative Potential

None; highly hydrophilic, rapidly excreted/ degraded by organisms; no bioaccumulation in food chain, aquatic/terrestrial organisms or soil; no accumulation risk in natural environment.

### 12.4 Mobility in Soil

High mobility (highly soluble in water); dissolves in soil water and is rapidly degraded by soil microbes; no long-term accumulation, no groundwater pollution risk (degraded before migration).

### 12.5 PBT/vPvB Assessment

Not classified as PBT/vPvB (fully biodegradable, practically non-toxic, no bioaccumulation); an environmentally friendly, high-stability low-calorie food sweetener.

### 12.6 Other Ecological Effects

Decomposes into non-toxic inorganic salts (sodium sulfate) that can be absorbed by plants as nutrients; promotes the growth of beneficial soil microorganisms; no adverse impact on ecosystem balance; safe for use in food production with no environmental side effects.

## SECTION 13: Disposal Considerations

### 13.1 Waste Treatment Methods

- **Product Waste:** Uncontaminated waste can be fully reused as food sweetener; slightly contaminated waste can be used as microbial culture nutrient (sulfur/nitrogen source); heavily contaminated waste can be disposed of as non-hazardous solid waste in accordance with local food safety regulations; aqueous waste can be directly treated by biological wastewater treatment systems (rapidly biodegradable).
- **Packaging Waste:** Rinse empty containers with pure water (rinse water usable for food production if qualified); dispose of rinsed packaging as food-grade non-hazardous waste or recycle (HDPE/paper/aluminum foil/carton); no special disposal requirements.

### 13.2 Disposal Notes

No special disposal requirements; incineration is acceptable (produces only CO<sub>2</sub>, water, sodium sulfate and trace cyclohexane, no toxic fumes); landfilling is also acceptable (rapidly degraded by soil microorganisms); no neutralization or other pretreatment needed for any waste (non-toxic, non-corrosive).

## SECTION 14: Transport Information

### 14.1 UN Classification & Number

ADR/RID/IMDG/IATA-DGR: Not dangerous goods (no UN number)

### 14.2 Transport Details

- UN Proper Shipping Name: Non-dangerous goods (Food Additive - Sodium Cyclamate)
- Transport Hazard Class: None
- Packaging Group: None
- Marine Pollutant: No (IMDG)

### 14.3 Transport Precautions

- Transport at normal room temperature ( $\leq 35^{\circ}\text{C}$ ); use ordinary sealed food-grade packaging (inner plastic lining + outer carton/drum); no moisture-proof requirement (non-hygroscopic); avoid package collision and breakage (to prevent contamination).
- Prevent powder/granule leakage; use pallets for loading to avoid ground contact and contamination; no special temperature/humidity control for transport (cost-saving).

- **No incompatible transport materials;** can be transported with other food additives/food raw materials (no separation required); avoid transport with infant food raw materials (labeling reminder only).
- Mark package with "**Food Grade**", "**Non-Dangerous Goods**", "**Strictly Follow Dosage Limits**" and "**Not for Infant Food**".

## SECTION 15: Regulatory Information

### 15.1 National Regulations (China)

- Hazardous Chemical Safety Management Regulation (Non-hazardous classification)
- National Food Safety Standard for Food Additives (GB 2760-2021) – approved as food sweetener/flavor modifier (**limited dosage: 0.15-1.0 g/kg according to food type**)
- Food Hygiene Law of the People's Republic of China
- **Key Restrictions:** ① No use in infant food (0-12 months); ② Cyclohexylamine impurity content  $\leq 0.001\%$  (GB 1886.30-2019); ③ Strict compliance with dosage limits for all food types.

### 15.2 International Regulations

- GHS Rev.9: Non-hazardous (0 Category)
- REACH (EU): Registered; not in SVHC Candidate List; complies with EC 1333/2008 (ADI 0-11 mg/kg bw); cyclohexylamine impurity  $\leq 0.001\%$
- TSCA (US): Listed on Inventory; FDA GRAS certified (21 CFR 172.836); dosage limits in line with Codex Alimentarius
- Codex Alimentarius (FAO/WHO): Approved as food sweetener (Codex STAN 192-1995), ADI: 0-11 mg/kg body weight; strict cyclohexylamine impurity limit.

### 15.3 Other Requirements

Comply with local food safety/transport/environmental regulations; follow national dosage limits for different food types; mark the addition amount on finished food labels; no use in infant food and special medical food for infants.

## SECTION 16: Other Information

### 16.1 Document Validity

This MSDS is based on current scientific and technical knowledge, compliant with international and national standards. It is for the safe handling, storage, transport and disposal of food-grade Sodium Cyclamate, with special attention to dosage limits and infant food restriction.

### 16.2 Revision History

First Version – 26 FEB 2026 (No subsequent revisions)