



# NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.  
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## Safety Data Sheet (MSDS)

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

**Name:** Saccharose (Sucrose) (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: Saccharose (Sucrose) (Food Grade, Anhydrous)
- Product No.: SAC-20260228
- Brand: SIGALD
- CAS-No.: 57-50-1
- Synonyms: Cane sugar; Beet sugar; Table sugar; Food Grade Saccharose; 蔗糖（无水食品级）

#### 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 (primary sweetener, bulking agent, humectant, crystallization regulator); raw material for candy, beverage, bakery, dairy, confectionery, seasoning; food processing auxiliary material.
- **Uses Advised Against:** No restricted uses for food grade; avoid long-term exposure to high temperature/humidity (caking/hydrolysis); no special prohibited uses.

### 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 (for accidental contact)

#### 2.3 Hazard Summary

White crystalline powder/granule, odorless, pure sweet taste. **Non-toxic, non-irritating** under all normal use conditions; no skin/eye/respiratory irritation, no acute/chronic toxicity. Excessive oral ingestion may cause dental caries or mild gastrointestinal discomfort (bloating) in sensitive individuals; no other health hazards. Non-combustible (decomposes at high temperature), no explosion risk. Naturally present in plants (cane, beet, fruit); fully metabolized in the human body. Environmentally friendly, fully biodegradable.

## 2.4 Physical & Chemical Hazards

No physical/chemical hazards under normal storage/use; non-combustible, decomposes at >187°C to produce caramel and non-toxic volatile substances; slight hydrolysis in acidic hot water to glucose and fructose; hygroscopic (absorbs moisture and cakes in high humidity).

## 2.5 Health Hazards

No acute/chronic toxic effects at normal food intake dosages; no skin/eye/respiratory irritation, no sensitization, mutagenicity, carcinogenicity or reproductive toxicity (FAO/WHO certified); excessive ingestion may cause dental caries, overweight or temporary gastrointestinal discomfort; safe for all population groups including infants and the elderly.

## 2.6 Environmental Hazards

No adverse effects on aquatic/terrestrial organisms; fully biodegradable (BOD<sub>5</sub> /COD >0.98) by microorganisms; no bioaccumulation potential, no eutrophication risk; acts as a microbial nutrient in natural environments.

## SECTION 3: Composition/Information on Ingredients

- **Substance Type:** Pure disaccharide chemical substance (natural food-grade sweetener)

### 3.1 Main Component

Component	Content (w/w)	CAS No.	Formula
Saccharose (Anhydrous)	≥99.5%	57-50-1	C <sub>12</sub> H <sub>22</sub> O <sub>11</sub>

### 3.2 Non-Hazardous Auxiliary Ingredients

- Food-grade anticaking agent (Silicon Dioxide): ≤0.1% (trace)
- Deionized water (trace): ≤0.1%
- **Total Hazardous Ingredients:** 0%

## 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 will be expelled spontaneously).
- **In Case of Skin Contact:** Rinse skin with running water for 3-5 minutes if needed; no irritation, no residual effect, no need for emollients.
- **In Case of Eye Contact:** Rinse eyes with plenty of clean water for 5 minutes (hold eyes open) if powder enters; no eye damage or irritation, no long-term effect.
- **If Swallowed:** Rinse mouth with water and drink a small amount of warm water. Normal ingestion is safe; if excessive ingestion causes mild bloating/dental discomfort, stop intake and symptoms will disappear spontaneously; no induced vomiting required.

### 4.2 Most Important Symptoms & Effects

No acute toxic symptoms; only mild dental caries (long-term excessive intake) or temporary gastrointestinal bloating (one-time excessive ingestion) in sensitive individuals; no severe health hazards.

### 4.3 Medical Attention Note

No specific medical treatment required for any exposure under normal use conditions; consult a doctor only if gastrointestinal discomfort persists for more than 24 hours (extremely rare).

## **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 to cool and prevent thermal decomposition.

### **5.2 Special Hazards from the Substance**

Non-combustible; decomposes at >187°C to produce caramel, carbon monoxide (trace) and non-toxic volatile organic substances; no explosive gases, no burning residues, no secondary hazards.

### **5.3 Advice for Firefighters**

Wear standard fire-fighting protective gear (gloves, goggles, dust respirator); avoid inhalation of thermal decomposition fumes/caramel dust in large-scale high-temperature conditions; fight fire from a safe distance and ensure good ventilation; use water to cool the surrounding containers to prevent decomposition.

## **SECTION 6: Accidental Release Measures**

### **6.1 Personal Precautions**

Wear non-slip shoes for large spills (powder/granule 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 to avoid direct entry into drinking water sources (no environmental risk if entered, can be 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 to avoid caking from moisture absorption.

### **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 dust suppression measures (low-speed mixing) during bulk mixing/transfer to avoid fine powder formation and dust dispersion.
- Avoid prolonged exposure to high temperature (>40°C) and high humidity (RH>70%) to prevent caking, hydrolysis and discoloration.



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- **Hygiene Measures:** Wash hands with soap and water after handling; do not eat/drink/smoke while operating the product; keep the operating area dry to avoid caking of spilled powder.

## 7.2 Safe Storage Conditions

- **Storage:** Cool, dry, well-ventilated food-grade warehouse; keep container tightly sealed with inner plastic lining to prevent moisture absorption, caking and contamination.
- **Temperature & Humidity:** Storage temp  $\leq 25^{\circ}\text{C}$ , relative humidity  $\leq 60\%$ ; install dehumidification and temperature control equipment for long-term storage ( $\geq 12$  months).
- **Incompatibilities:** Strong mineral acids (concentrated HCl/H<sub>2</sub>SO<sub>4</sub>, cause hydrolysis), high-temperature oxidizing agents (trace, no major reaction).
- **Storage Class:** TRGS 510 Class 13 (Non-Hazardous Solids)
- **Shelf Life:** 36 months (unopened, specified conditions); 18 months after opening (seal tightly, dry storage, use as soon as possible).

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Occupational Exposure Limits

No specific OEL for food-grade Saccharose; 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; dust collection system; dehumidification equipment for storage and operating areas; keep the production area dry.
- **Personal Protective Equipment:**
  - Eye/Face: Safety goggles with side shields (optional for bulk handling, no irritation risk, only to prevent powder from entering eyes).
  - Skin: Nitrile rubber gloves (food grade,  $\geq 0.11$  mm) 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; dry hand towels provided to avoid moisture on hands causing powder caking.

## SECTION 9: Physical and Chemical Properties

a) Physical State: White crystalline powder/granule (fine powder/granule/sucrose crystal)b) Color: White, no yellowing or discolorationc) Odor: Odorlessd) Taste: Pure, mild sweet taste, no bitter aftertaste, relative sweetness  $\approx 1.0$  (reference standard)e) Melting Point: 185-187 $^{\circ}\text{C}$  (decomposes to caramel above this temperature)f) Boiling Point: N/A (decomposes before boiling)g) Flammability: Non-combustibleh) Flash Point:  $>200^{\circ}\text{C}$  (Closed Cup)i) Autoignition Temperature:  $>450^{\circ}\text{C}$ j) pH Value (25 $^{\circ}\text{C}$ , 5% aq. solution): 5.0-7.0 (neutral weakly acidic)k)

Solubility: Freely soluble in water ( $\approx 2000$  g/L at  $25^{\circ}\text{C}$ , highly soluble); slightly soluble in ethanol (0.6 g/L); insoluble in ether/chloroform) Density ( $25^{\circ}\text{C}$ , solid): 1.587 g/cm<sup>3</sup>m Bulk Density: 0.8-1.2 g/cm<sup>3</sup> (varies with particle size)n Hygroscopy: Moderately hygroscopic (absorbs moisture and cakes in RH>70%)o Vapor Pressure ( $25^{\circ}\text{C}$ ): Negligible (<0.00001 hPa)p Viscosity: N/A (solid); 15-20 mPa·s (10% aqueous solution,  $25^{\circ}\text{C}$ )q Partition Coefficient (log Kow): -3.7 (highly hydrophilic)r Explosive Properties: Not explosives) Oxidizing Properties: None

## SECTION 10: Stability and Reactivity

### 10.1 Chemical Stability

Stable under recommended storage/use conditions; extremely stable in neutral/weakly alkaline food systems (pH 5.0-8.0); no decomposition in normal food processing temperatures (0-121 $^{\circ}\text{C}$ , sterilization/baking/pasteurization); slight hydrolysis in acidic hot water (pH<4.0, >80 $^{\circ}\text{C}$ ) to glucose and fructose (no toxic by-products).

### 10.2 Hazardous Reactions

No hazardous reactions under normal food production use; no polymerization; hydrolyzes to glucose and fructose in strong acid/high temperature acidic water (non-hazardous, both are natural monosaccharides); decomposes to caramel and non-toxic volatile substances at >187 $^{\circ}\text{C}$  (no dangerous by-products).

### 10.3 Conditions to Avoid

Extreme high temperature (>187 $^{\circ}\text{C}$ , decomposition), strong mineral acids (hydrolysis), prolonged high humidity (RH>70%, caking), direct contact with high-concentration oxidizing agents (trace reaction).

### 10.4 Incompatible Materials

Concentrated strong mineral acids (HCl, H<sub>2</sub>SO<sub>4</sub>), high-temperature strong oxidizing agents (hydrogen peroxide in high concentration); no incompatibility with common food additives.

### 10.5 Hazardous Decomposition Products

Caramel, trace carbon monoxide and non-toxic volatile organic substances (only at >187 $^{\circ}\text{C}$ ); no hazardous by-products under normal food use and storage conditions.

## SECTION 11: Toxicological Information

### 11.1 Key Toxicological Effects

- **Acute Toxicity:** Oral (Rat, LD<sub>50</sub>) >29,700 mg/kg (practically non-toxic, no lethal dose under normal intake); Dermal (Rabbit, LD<sub>50</sub>) >50,000 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 GRAS certified (no carcinogenic risk).
- **Reproductive Toxicity:** No adverse reproductive/developmental effects in animal tests; safe for pregnant/lactating women and infants at normal intake dosages.
- **Target Organ Toxicity:** No target organ toxicity; metabolized to glucose and fructose in the human body by sucrase, then further metabolized to CO<sub>2</sub> and water for energy supply.
- **Aspiration Hazard:** Low (crystalline powder/granule, moderate bulk density, no aspiration risk even for fine powder).

## 11.2 Additional Information

Saccharose is the most common natural sweetener, widely present in cane, beet and fruits; approved by FAO/WHO/Codex Alimentarius, ADI: not specified (no upper limit for normal intake); fully metabolized in the human body for energy, no residual; long-term use in food industry confirms absolute high safety at normal dosages.

## SECTION 12: Ecological Information

### 12.1 Ecotoxicity

- Fish (Zebrafish, LC<sub>50</sub>): >100,000 mg/L (96h)
- Daphnia (EC<sub>50</sub>): >50,000 mg/L (48h)
- Algae (EC<sub>50</sub>): >100,000 mg/L (72h) No toxic effects on aquatic organisms at any concentration; non-toxic to soil microorganisms, plants and terrestrial animals; can be used as a nutrient for microbial culture.

### 12.2 Persistence & Degradability

Fully biodegradable (BOD<sub>5</sub> /COD >0.98) in aquatic/soil environments; degraded by microorganisms (sucrase-producing bacteria/fungi) into glucose and fructose within a few hours, then further decomposed into CO<sub>2</sub> and water; no residual pollution, no persistent organic pollutants.

### 12.3 Bioaccumulative Potential

None; highly hydrophilic, rapidly metabolized and utilized by all organisms; no bioaccumulation in food chain, aquatic/terrestrial organisms or soil.

### 12.4 Mobility in Soil

High mobility (highly soluble in water); readily dissolves in soil water, but 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); the most environmentally friendly food sweetener.

### 12.6 Other Ecological Effects

Acts as a microbial nutrient in natural environments, promotes the growth of beneficial 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/feed sweetener; slightly contaminated waste can be used as microbial culture nutrient; 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).

### 13.2 Disposal Notes

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

## 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 - Saccharose/Sucrose)
- Transport Hazard Class: None
- Packaging Group: None
- Marine Pollutant: No (IMDG)

### 14.3 Transport Precautions

- Transport at ≤25°C; use sealed, moisture-proof food-grade packaging (inner plastic lining + outer carton/drum); avoid rain, moisture, direct sunlight and package collision.
- Prevent powder/granule leakage and caking; use pallets for loading to avoid ground contact, moisture absorption and contamination.
- Avoid transport with concentrated strong mineral acids, high-temperature strong oxidizing agents and non-food grade hazardous chemicals; no special separation required from other food additives.
- Mark package with "**Food Grade**", "**Moisture Proof**", "**Non-Dangerous Goods**" and "**Keep Dry**".

## 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/bulking agent (unlimited dosage for most foods)
- Food Hygiene Law of the People's Republic of China
- GB 10765/GB 10767 (Infant Formula Food Standards) – compliant for unrestricted use

### 15.2 International Regulations

- GHS Rev.9: Non-hazardous (0 Category)
- REACH (EU): Registered; not in SVHC Candidate List; complies with EC 1333/2008 (unlimited dosage)
- TSCA (US): Listed on Inventory; FDA GRAS certified (21 CFR 184.1854)
- Codex Alimentarius (FAO/WHO): Approved as food sweetener/bulking agent (Codex STAN 192-1995), ADI: not specified (no upper limit)

### 15.3 Other Requirements

Comply with local food safety/transport/environmental regulations; follow GB 2760-2021 dosage requirements for special foods (e.g., low-sugar food); store in dry conditions to avoid caking; no other special use restrictions.

## 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 Saccharose (Sucrose).

### 16.2 Revision History

First Version - 26 FEB 2026 (No subsequent revisions)