



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: Sorbic Acid (Food Grade)**Revision Date:** 26 FEB 2026

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

1.1 Product Identifiers

- Product Name: Sorbic Acid (Food Grade)
- Product No.: SOR-20260228
- Brand: SIGALD
- CAS-No.: 110-44-1
- Synonyms: (E,E)-2,4-Hexadienoic acid; 2,4-Hexadienoic acid; Food Grade Sorbic Acid; 山梨酸

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 (natural preservative, mold inhibitor, yeast inhibitor); raw material for beverage, bakery, confectionery, dairy, meat, pickles; food flavor auxiliary material.
- **Uses Advised Against:** Avoid use in strong alkaline food systems (pH >8.0, decomposes); avoid excessive contact with mucous membranes in high concentration.

SECTION 2: Hazards Identification

2.1 GHS Classification

Skin Irritation (Category 2); Eye Irritation (Category 2); Specific Target Organ Toxicity - Single Exposure (Category 3, Gastrointestinal tract)

2.2 GHS Label Elements

- Hazard Pictogram: (Warning)
- Signal Word: **Warning**
- Hazard Statements: H315 (Causes skin irritation); H319 (Causes serious eye irritation); H335 (May cause respiratory irritation); H302 (Harmful if swallowed in large amounts)
- Precautionary Statements: P264, P280, P302+P352, P305+P351+P338, P312, P332+P313

2.3 Hazard Summary

White crystalline powder/flake, slight characteristic odor, sour taste. Mild skin/eye irritation in direct high-concentration contact; may cause mild respiratory irritation if inhaled as fine dust; excessive oral ingestion causes mild gastrointestinal discomfort. Non-combustible, no explosion

risk. Effective food preservative in acidic systems (pH 2.5-6.0); decomposes in strong alkali. Environmentally friendly, fully biodegradable.

2.4 Physical & Chemical Hazards

No physical/chemical hazards under normal storage/use; non-combustible, non-explosive; slightly hygroscopic; decomposes in strong alkaline conditions (pH >8.0) and extreme high temperature (>200°C).

2.5 Health Hazards

Mild skin/eye/respiratory irritation at high concentration; mild nausea/stomachache with excessive ingestion; no acute/chronic toxic effects at standard food preservative dosages; no sensitization, mutagenicity, carcinogenicity or reproductive toxicity (FAO/WHO certified).

2.6 Environmental Hazards

No adverse effects on aquatic/terrestrial organisms; fully biodegradable (BOD₅ /COD >0.9); no bioaccumulation potential; no eutrophication risk; safe for natural ecosystems.

SECTION 3: Composition/Information on Ingredients

- **Substance Type:** Pure chemical substance (food-grade unsaturated carboxylic acid preservative)

3.1 Main Component

Component	Content (w/w)	CAS No.	Formula
Sorbic Acid	≥99.0%	110-44-1	C ₆ H ₈ O ₂

3.2 Non-Hazardous Auxiliary Ingredients

- Food-grade anticaking agent (Silicon Dioxide): ≤0.3%
- Deionized water (trace): ≤0.2%
- **Total Hazardous Ingredients:** ≥99.0% (Sorbic Acid)

SECTION 4: First Aid Measures

4.1 First-Aid for Different Exposure Routes

- **If Inhaled:** Move to fresh air, keep breathing comfortable. Rinse mouth with water; consult a doctor if coughing/chest discomfort persists.
- **In Case of Skin Contact:** Rinse skin thoroughly with running water for 10-15 minutes, remove contaminated clothing. Apply mild moisturizer if irritation/redness occurs; consult a doctor if symptoms persist.
- **In Case of Eye Contact:** Rinse eyes cautiously with plenty of clean water for 10 minutes (hold eyes open), remove contact lenses if present. Consult a doctor immediately if irritation/redness/blurred vision occurs.
- **If Swallowed:** Rinse mouth with water, drink 1-2 cups of milk or water to dilute. Do not induce vomiting. Consult a doctor if gastrointestinal discomfort (nausea, stomachache) occurs.

4.2 Most Important Symptoms & Effects

Mild skin/eye redness/irritation; mild cough from dust inhalation; mild gastrointestinal discomfort with excessive ingestion; no severe toxic symptoms.



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4.3 Medical Attention Note

Inform the physician of the product name (Sorbic Acid) and exposure route if medical consultation is required; no specific antidote, symptomatic treatment only.

SECTION 5: Firefighting Measures

5.1 Suitable Extinguishing Media

Water spray, foam, carbon dioxide (CO₂), dry chemical powder – all applicable with no limitations.

5.2 Special Hazards from the Substance

Non-combustible; decomposes only at extreme high temperature (>200°C) to produce non-toxic carbon dioxide and water vapor; no hazardous combustion gases, fumes or residues.

5.3 Advice for Firefighters

Wear standard fire-fighting protective gear (gloves, goggles, dust respirator); avoid inhalation of thermal decomposition dust in large-scale fire; fight fire from a safe distance and ensure good ventilation.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions

Wear nitrile rubber gloves, safety goggles and FFP1 dust mask for all spills; wear non-slip shoes (powder may cause slippery floors); ensure good ventilation at the spill site.

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).

6.3 Containment & Cleaning Up

- **Small Spill:** Gently sweep up with a brush, collect in a sealed plastic container for reuse/disposal; wipe the floor with a damp cloth to prevent slipping.
- **Large Spill:** Contain with plastic barriers to prevent spread; transfer to sealed HDPE drums for recycling/disposal; clean the area with a damp mop and dry thoroughly.

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 (mist spray) during bulk mixing/transfer to avoid fine powder formation and inhalation.
- Avoid direct contact with skin, eyes and mucous membranes; wear PPE for bulk handling.
- Avoid contact with strong alkalis (NaOH/KOH) and high temperature (>200°C) to prevent decomposition.
- **Hygiene Measures:** Wash hands with soap and water after handling; do not eat/drink/smoke while operating the product; avoid touching eyes/mucous membranes after contact.

7.2 Safe Storage Conditions

- **Storage:** Cool, dry, well-ventilated food-grade warehouse; keep container tightly sealed to prevent moisture absorption, caking and contamination.
- **Temperature & Humidity:** Storage temp $\leq 25^{\circ}\text{C}$, relative humidity $\leq 60\%$; install dehumidification equipment for long-term storage.
- **Incompatibilities:** Strong alkalis, strong oxidizing agents, alkaline food additives (sodium bicarbonate, sodium citrate).
- **Storage Class:** TRGS 510 Class 13 (Non-Hazardous Solids)
- **Shelf Life:** 36 months (unopened, specified conditions); 12 months after opening (seal tightly, dry storage).

SECTION 8: Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

- Occupational Exposure Limit (OEL): TWA 10 mg/m³ (respirable dust); STEL 20 mg/m³
- ACGIH TLV: TWA 10 mg/m³ (total dust)

8.2 Exposure Controls & PPE

- **Engineering Controls:** Local exhaust ventilation (LEV) for large-scale processing; dust collection system; dehumidification equipment for storage area; emergency eye wash station in bulk processing area.
- **Personal Protective Equipment:**
 - Eye/Face: Safety goggles with side shields (mandatory for all handling operations) to prevent powder splashing.
 - Skin: Nitrile rubber gloves (food grade, $\geq 0.11\text{mm}$) and clean protective clothing for all handling.
 - Respiratory: FFP1 dust mask for regular bulk handling; FFP2 mask for large-scale spill or fine dust generation.
 - Foot: Non-slip food-grade safety shoes (mandatory for all handling to prevent slipping).
 - Hygiene: Food-grade hand washing facilities with pure water and soap at the workplace.

SECTION 9: Physical and Chemical Properties

a) Physical State: Crystalline powder/flake b) Color: White to off-white c) Odor: Slight characteristic acid odor d) Taste: Sour, slightly bitter e) Melting Point: 132-136 $^{\circ}\text{C}$ f) Boiling Point: 228 $^{\circ}\text{C}$ (decomposes) g) Flammability: Non-combustible h) Flash Point: $>150^{\circ}\text{C}$ (Closed Cup) i) Autoignition Temperature: $>400^{\circ}\text{C}$ j) pH Value (25 $^{\circ}\text{C}$, 1% aq. suspension): 3.0-4.0 k) Solubility: Slightly soluble in water ($\approx 1.6\text{ g/L}$ at 25 $^{\circ}\text{C}$); soluble in ethanol (250 g/L), ether, propylene glycol l) Density (25 $^{\circ}\text{C}$, solid): 1.204 g/cm³ m) Bulk Density: 0.6-0.9 g/cm³ n) Hygroscopy: Slightly hygroscopic o) Vapor Pressure (25 $^{\circ}\text{C}$): Negligible ($<0.0001\text{ hPa}$) p) Viscosity: N/A (solid); 3-5 mPa·s (10% ethanol solution, 25 $^{\circ}\text{C}$) q) Partition Coefficient (log K_{ow}): 1.38 (slightly lipophilic) 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 acidic food systems (pH 2.5-6.0); no decomposition in normal food processing temperatures (0-121°C, sterilization/baking).

10.2 Hazardous Reactions

No hazardous reactions under normal food production use; no polymerization; reacts with strong alkalis to form sorbate salts (non-hazardous); decomposes at >200°C into non-toxic by-products.

10.3 Conditions to Avoid

Extreme high temperature (>200°C), direct contact with strong concentrated alkalis, prolonged high humidity (caking), strong oxidizing agents.

10.4 Incompatible Materials

Concentrated strong alkalis (NaOH, KOH), high-concentration oxidizing agents (hydrogen peroxide), alkaline food additives, heavy metal ions (Cu²⁺, Fe³⁺ - reduce preservative efficacy).

10.5 Hazardous Decomposition Products

Non-toxic carbon dioxide and water vapor (only at >200°C); no hazardous by-products under normal food use conditions.

SECTION 11: Toxicological Information

11.1 Key Toxicological Effects

- **Acute Toxicity:** Oral (Rat, LD₅₀) = 7360 mg/kg (practically non-toxic); Dermal (Rabbit, LD₅₀) >5000 mg/kg; Inhalation (Rat, LC₅₀) >10 mg/m³ (4h).
- **Skin/Eye Irritation:** Mild irritation (Rabbit test, 4h exposure); no corrosivity, irritation reversible after rinsing.
- **Sensitization:** No skin/respiratory sensitization (long-term human/animal use data, FAO/WHO certified).
- **Mutagenicity/Carcinogenicity:** No mutagenic effects (Ames test, chromosome aberration test); IARC Class 3 (not classifiable as carcinogenic to humans); FDA GRAS certified.
- **Reproductive Toxicity:** No adverse reproductive/developmental effects in animal tests; safe for pregnant/lactating women at standard dosages.
- **Target Organ Toxicity:** Mild gastrointestinal tract irritation only with extreme excessive ingestion; no target organ toxicity at standard food dosages.
- **Aspiration Hazard:** Low (crystalline powder/flake, moderate bulk density, no aspiration risk).

11.2 Additional Information

Sorbic Acid is a natural preservative (extracted from mountain ash berries), approved by FAO/WHO/Codex Alimentarius; metabolized to carbon dioxide and water in the human body (same as fatty acids); long-term use in food industry confirms high safety at standard preservative dosages.

SECTION 12: Ecological Information

12.1 Ecotoxicity

- Fish (Zebrafish, LC₅₀): >2000 mg/L (96h)
- Daphnia (EC₅₀): >1000 mg/L (48h)
- Algae (EC₅₀): >2000 mg/L (72h) No toxic effects on aquatic organisms; non-toxic to soil microorganisms and plants.

12.2 Persistence & Degradability

Fully biodegradable (BOD₅/COD >0.9) in aquatic/soil environments; degraded by microorganisms into inorganic substances within 2-3 days; no residual pollution.

12.3 Bioaccumulative Potential

None; low lipophilicity, rapidly metabolized/utilized by organisms; no bioaccumulation in food chain/aquatic/terrestrial organisms.

12.4 Mobility in Soil

Low mobility (slightly soluble in water); adsorbed by soil particles, but rapidly degraded by soil microbes; no long-term accumulation, no groundwater pollution risk.

12.5 PBT/vPvB Assessment

Not classified as PBT/vPvB (fully biodegradable, practically non-toxic, no bioaccumulation).

12.6 Other Ecological Effects

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 reused as food/feed preservative; contaminated waste can be neutralized with dilute alkali (5% NaOH) then 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.
- **Packaging Waste:** Rinse empty containers with pure water/ethanol (rinse water usable for food production if qualified); dispose of rinsed packaging as food-grade non-hazardous waste or recycle (HDPE/paper/aluminum foil).

13.2 Disposal Notes

Neutralize spilled powder with dilute alkali before disposal to reduce irritation; incineration is acceptable (produces only non-toxic by-products); landfilling is also acceptable (biodegrades rapidly in soil).

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 - Sorbic Acid)
- Transport Hazard Class: None



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- Packaging Group: None
- Marine Pollutant: No (IMDG)

14.3 Transport Precautions

- Transport at $\leq 25^{\circ}\text{C}$; use sealed, moisture-proof food-grade packaging; avoid rain, moisture, direct sunlight and package collision.
- Prevent powder leakage/caking; use pallets for loading to avoid ground contact/contamination.
- Avoid transport with strong concentrated alkalis, strong oxidizing agents, alkaline food additives and non-food grade hazardous chemicals.
- Mark package with "**Food Grade**", "**Moisture Proof**", "**Irritant**" and "**Non-Dangerous Goods**".

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 preservative
- Food Hygiene Law of the People's Republic of China
- GB 10765/GB 10767 (Infant Formula Food Standards) – compliant for limited use

15.2 International Regulations

- GHS Rev.9: Skin Irrit. 2, Eye Irrit. 2, STOT-SE 3
- REACH (EU): Registered; not in SVHC Candidate List; complies with EC 1333/2008
- TSCA (US): Listed on Inventory; FDA GRAS certified (21 CFR 184.1028)
- Codex Alimentarius (FAO/WHO): Approved as food preservative (Codex STAN 192-1995), ADI: 0-25 mg/kg body weight

15.3 Other Requirements

Comply with local food safety/transport/environmental regulations; follow GB 2760-2021 maximum addition limits for different food types (no excessive use); effective only in acidic food systems (pH 2.5-6.0).

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 Sorbic Acid.

16.2 Revision History

First Version - 26 FEB 2026 (No subsequent revisions)