Safety Data Sheet (MSDS)

(Complies with GB/T 16483, GB/T 17519, GHS Rev.9, IMDG and IATA Standards)

Product Name: Sodium Ascorbate**Product Number**: SAA-20260225**Brand**: SIGALD**CAS Number**: 134-03-2**Revision Date**: 25 FEB 2026

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

1.1 **Product Identifiers**

- Product Name: Sodium Ascorbate
- Synonyms: L-Ascorbic acid sodium salt; Vitamin C sodium salt; Ascorbate sodium
- CAS-No.: 134-03-2
- Molecular Formula: $C_6H_7NaO_6$
- Molecular Weight: 198.11 g/mol

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 Contact: +86-021-50350029 (24h CHEMTREC)

1.4 **Identified Uses & Uses Advised Against**

- **Identified Uses**: Food additive (antioxidant/nutritional fortifier); pharmaceutical raw material (Vitamin C supplement); cosmetic additive (antioxidant/anti-aging); feed additive (immunity enhancer).
- **Uses Advised Against**: Not for long-term storage of aqueous solution; not for mixing with strong oxidizing agents in large quantities; not for use in acidic systems with pH <3.0.

SECTION 2: Hazards Identification

2.1 **GHS Classification**

- Not a hazardous substance or mixture (GHS 0 Category); no acute/chronic hazard classification.

2.2 **GHS Label Elements**

- Hazard Pictogram: None
- Signal Word: None
- Hazard Statements: None
- Precautionary Statements: None

2.3 **Physical & Chemical Hazards**: Non-combustible; no explosion, corrosion, oxidation or other physical and chemical hazards under normal use and storage conditions; aqueous solution is stable under neutral-alkaline conditions.2.4 **Health Hazards**: Non-toxic, non-irritating to skin and mucous membranes; mild nausea, abdominal distension or diarrhea may occur if ingested in excessive single quantities; no acute/chronic toxic effects for skin contact or inhalation.2.5

Environmental Hazards: Environmentally friendly, fully biodegradable; non-toxic to aquatic organisms and soil microorganisms; no bioaccumulation, no environmental pollution risk at normal application concentrations.2.6 **Other Hazards**: No additional hazards identified.

SECTION 3: Composition/Information on Ingredients

- **Substance Type**: Pure Substance
- **Active Ingredient**: Sodium Ascorbate (100%, CAS:134-03-2)
- **Key Components**: Ascorbic acid moiety (≥87%), sodium ion (11.0-12.5%)
- **Impurities**: No hazardous impurities present above specified limit values; heavy metal and harmful substance content meets food/pharmaceutical grade standards.

SECTION 4: First Aid Measures

4.1 **First-Aid Procedures**

- **Inhalation**: Move to fresh air immediately; no special treatment if no discomfort; drink a small amount of water if coughing occurs, no medical attention needed in most cases.
- **Skin Contact**: Rinse the affected area with plenty of running water for 3-5 minutes; remove contaminated clothing and wash before reuse; no special treatment for non-irritation.
- **Eye Contact**: Rinse eyes thoroughly with plenty of running water for 5-10 minutes (lift upper/lower eyelids occasionally); remove contact lenses if worn; consult a doctor only if irritation persists.
- **Ingestion**: Rinse mouth with water; drink an appropriate amount of water to promote excretion if excessive quantity is ingested; consult a doctor only if severe gastrointestinal discomfort (nausea, diarrhea) occurs.

4.2 **Key Symptoms & Effects**

- **Acute Effects**: Mild gastrointestinal discomfort (nausea, abdominal distension) may occur after excessive single ingestion; no obvious acute toxicity for skin/inhalation contact.
- **Delayed Effects**: No known delayed toxic effects based on current scientific research and practical application data.

4.3 **Medical Attention Indication**: No immediate medical attention required under normal use and accidental contact conditions; seek medical advice only if excessive ingestion causes persistent severe gastrointestinal symptoms.

SECTION 5: Firefighting Measures

5.1 **Extinguishing Media**

- **Suitable**: Water spray, dry powder, foam, carbon dioxide (CO_2); any common extinguishing agent can be used.
- **Unsuitable**: No limitations on extinguishing media.

5.2 **Special Hazards from Combustion/Decomposition**

- The product is non-combustible; no hazardous combustion gases are generated when heated to high temperature.

- Decomposes at >210℃ to produce carbon dioxide, water vapor and sodium carbonate, no toxic or harmful gas release; no explosion risk under fire conditions.

5.3 **Advice for Firefighters**

- Wear standard fire-fighting protective gear (fire suit, gloves, goggles); no special breathing apparatus is needed.
- Fight the fire from a safe distance; prevent fire runoff from entering water bodies for general environmental protection purposes (no actual pollution risk).

SECTION 6: Accidental Release Measures

6.1 **Personal Precautions & Emergency Procedures**

- No special personal protective equipment for small spills; wear nitrile rubber gloves and a dust mask for large-scale powder spills to avoid dust inhalation.
- Ensure good ventilation in the spill area; no need to evacuate personnel for ordinary spills.

6.2 **Environmental Precautions**

- The product is biodegradable and non-toxic; small spills can be cleaned with water and discharged into the sewage system directly.
- Collect large spills to avoid excessive sodium ions entering water bodies and causing slight water salinity increase.

6.3 **Containment & Cleaning Methods**

- **Small Spill**: Sweep up the spilled powder with a dry clean brush/spatula, collect in a sealed bag for reuse or proper disposal; wipe the area with water and dry.
- **Large Spill**: Contain with dry sand to prevent spread, collect the powder in a sealed HDPE drum for reuse; clean the area with plenty of water, and discharge the cleaning water into the sewage treatment system after dilution.

SECTION 7: Handling and Storage

7.1 **Handling Precautions**

- Handle in a cool, dry and well-ventilated area; avoid direct sunlight, moisture and high temperature during operation.
- Wear a dust mask for large-scale weighing and mixing to avoid dust inhalation; wash hands with water after handling.
- Avoid mixing with strong oxidizing agents, concentrated acids, heavy metal salts (Fe^{3+}, Cu^{2+}); avoid long-term contact with air to prevent oxidation; prepare aqueous solution on site and use as soon as possible.
- No professional training required for handling; ordinary personnel can operate under normal conditions.

7.2 **Storage Conditions & Incompatibilities**

- **Storage Conditions**: Store in a cool, dry, well-ventilated warehouse; temperature ≤25℃, relative humidity ≤60%; keep containers tightly sealed with aluminum foil or HDPE material to prevent moisture absorption and oxidation.

- **Incompatibilities**: Strong oxidizing agents (hydrogen peroxide, potassium permanganate, chlorine water), concentrated mineral acids, heavy metal compounds (ferric chloride, copper sulfate), high temperature (>80℃) and high humidity (>70%).
- **Storage Classification**: Non-hazardous chemical storage area; food grade products must be stored in a dedicated food additive area, separate from non-food grade chemicals and toxic/harmful substances.
- **Shelf Life**: 36 months (unopened, room temperature); 48 months (unopened, 2-8℃); 6 months after opening (sealed, dry).

SECTION 8: Exposure Controls/Personal Protection

8.1 **Exposure Limits**: No official occupational exposure limits (OEL) for Sodium Ascorbate; the product is non-toxic, no special exposure limit required.8.2 **Exposure Controls & PPE**

- **Engineering Controls**: Basic ventilation in the handling area to avoid dust accumulation; no special exhaust or dust extraction equipment needed.
- **Personal Protective Equipment**:
  - Eye/Face: Safety glasses recommended for large-scale handling to avoid powder splashing; no protection for routine operation.
  - Skin: Nitrile rubber gloves recommended for prolonged contact; no protection for short-term contact.
  - Respiratory: N95 dust mask recommended for large-scale powder handling; no respiratory protection for routine operation.
  - Hand: Replace gloves if torn/contaminated; wash hands with water after glove removal.

SECTION 9: Physical and Chemical Properties

- Physical State: Crystalline powder/crystals
- Color: White to pale yellow
- Odor/Taste: Odorless, slightly salty and sour
- Melting Point: Decomposes at >210℃ (no obvious melting point)
- Boiling Point: Not applicable (decomposes before boiling)
- Flammability: Non-combustible
- Flash Point/Autoignition Temp.: Not applicable
- Solubility: Freely soluble in water (62 g/100 mL, 25℃); slightly soluble in ethanol; insoluble in chloroform/ether/benzene
- Density (20℃): 1.77 g/cm³ (powder)
- pH Value: 7.0-8.0 (5% aqueous solution, 25℃)
- Vapor Pressure (25℃): <0.0001 hPa (negligible)
- Particle Size: 90% passing 80 mesh (food grade); 90% passing 100 mesh (pharmaceutical grade)
- Hygroscopy: Slightly hygroscopic
- Decomposition Temp.: >210℃ (decomposes into ascorbic acid and sodium carbonate)

- Antioxidant Property: Strong reducing property, scavenges free radicals and reduces metal ions.

SECTION 10: Stability and Reactivity

10.1 **Chemical Stability**: Stable under recommended storage conditions; extremely stable in air and neutral-alkaline aqueous solution, not easy to oxidize; stable at room temperature for long -term storage.10.2 **Hazardous Reactions**: No hazardous reactions occur under normal use and handling conditions; no violent reaction with common solvents and raw materials.10.3 **Conditions to Avoid**: High temperature (>80℃), high humidity (>70%), direct sunlight, contact with strong oxidizing agents/concentrated acids/heavy metal ions, long-term storage of aqueous solution.10.4 **Incompatible Materials**: Strong oxidizing agents, concentrated mineral acids, ferric/copper/silver salts and other heavy metal compounds, acidic raw materials with pH <3.0.10.5 **Hazardous Decomposition Products**: No toxic decomposition products; decomposes into CO_2, H_2O, sodium carbonate and a small amount of organic matter at >210℃; no toxic gas release.

SECTION 11: Toxicological Information

11.1 **Toxicological Effects**

- **Acute Toxicity**: Oral (rat) LD_{50} >10,000 mg/kg (non-toxic); Dermal (rabbit) LD_{50} >20,000 mg/kg (non-toxic); Inhalation (rat) LC_{50} >50 mg/m³ (4h, non-toxic).
- **Skin/Eye Irritation**: No skin/eye irritation (rabbit 24h closed patch test); food grade product is non-irritating to human skin/mucous membranes.
- **Sensitization**: No skin/respiratory tract sensitization effects (human/animal tests).
- **Mutagenicity/Carcinogenicity**: No mutagenic effects (Ames test, chromosome aberration test); not classified as a carcinogen by IARC/EPA/NTP.
- **Reproductive Toxicity**: No reproductive toxicity; animal tests show no adverse effects on fertility and fetal development.
- **Target Organ Toxicity**: No target organ toxicity for single/repeated exposure; no adverse effects on liver, kidney, heart and other organs.

SECTION 12: Ecological Information

12.1 **Ecotoxicity**: Non-toxic to aquatic organisms; Zebrafish LC_{50} (96h) >10,000 mg/L; Daphnia EC_{50} (48h) >5,000 mg/L; Green Algae EC_{50} (72h) >10,000 mg/L.12.2 **Persistence & Degradability**: Fully biodegradable (BOD_5 /COD >0.8); decomposed into CO_2, H_2O and sodium ions by microorganisms in water/soil, no persistent pollutants.12.3 **Bioaccumulative Potential**: No bioaccumulation potential; sodium ions and ascorbic acid are essential nutrients for organisms, easy to metabolize and excrete.12.4 **Soil Mobility**: Moderate mobility; sodium ions can be adsorbed by soil particles or leached with water, ascorbic acid is easily degraded by soil microorganisms, no groundwater pollution risk.12.5 **PBT/vPvB Assessment**: Not classified as PBT/vPvB; meets global environmental protection standards.12.6 **Other Ecological Effects**:

No adverse ecological effects; appropriate concentration can promote the growth of some soil microorganisms; no water eutrophication risk.

SECTION 13: Disposal Considerations

13.1 **Waste Disposal Methods**

- **Product Waste**: Unused/expired product can be reused or disposed of as ordinary non-hazardous waste; no special treatment required.
- **Packaging Waste**: Rinse empty packaging with water, dry and recycle as ordinary plastic/metal waste; food grade packaging is disposed of in accordance with food packaging waste regulations.
- **Cleaning Waste**: Cleaning water and waste residue can be discharged into the sewage treatment system directly, no special treatment required.

13.2 **Disposal Notes**: Do not mix with hazardous waste; dispose of in accordance with local national environmental protection regulations for non-hazardous waste.

SECTION 14: Transport Information

14.1 **UN Classification**: Non-hazardous goods; no UN number, no hazard class.14.2 **Transport Details**: Transport by ordinary dry means of transport (truck, train); no refrigeration required for transport.14.3 **Transport Precautions**: Avoid collision, moisture, direct sunlight and high temperature during transport; prevent packaging damage and powder leakage; do not transport with strong oxidizing agents, concentrated acids and toxic/harmful substances.14.4 **IATA/IMDG**: Permitted for air/sea transport; no restrictions, classified as ordinary cargo.

SECTION 15: Regulatory Information

15.1 **National Regulations (China)**: Complies with GB 1475VC-2010 (Food Additive Sodium Ascorbate), Chinese Pharmacopoeia, Feed Additive Hygiene Standards; non-hazardous chemical, no special production/use license required.15.2 **International Regulations**: Complies with FCC, USP, EP, FAO/WHO food additive standards; REACH (EU) registered, TSCA (US) listed; meets GHS non-hazardous classification requirements.

SECTION 16: Other Information

- This MSDS is compiled based on current scientific research and practical application data, complying with international and national relevant standards.
- The supplier is not liable for any damage caused by improper use, storage, transport or disposal of the product.
- This document is for professional reference only and shall not be used as other commercial purposes; it will be updated in a timely manner with the latest technical and regulatory information.
- **Revision History**: First revision, issued on 25 FEB 2026.