Safety Data Sheet (MSDS)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)**Product Name:** Taurine (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: Taurine (Food Grade)
- Product Number: TAU-20260228
- Brand: SIGALD
- CAS-No.: 107-35-7
- Synonyms: 2-Aminoethanesulfonic acid; Taurin; Food Grade Taurine; 牛磺酸

1.2 Details of the supplier

- 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)

1.4 Relevant Identified Uses and Uses Advised Against

- **Identified Uses**: Food additive (nutritional fortifier, flavor enhancer, acidity regulator); raw material for beverage, dairy, infant food, confectionery and nutritional supplements; feed additive and pharmaceutical intermediate.
- **Uses Advised Against**: No restricted uses for food grade; avoid large-scale mixing with strong oxidizing agents in high temperature environment.

SECTION 2: Hazards Identification

|Summary of Emergency Measures|White free-flowing crystalline powder, odorless. Non-hazardous. After inhalation: Move to fresh air if discomfort occurs. In case of skin contact: Rinse with water; no irritation. After eye contact: Rinse with plenty of water for 5 minutes; no adverse effect. After swallowing: Rinse mouth with water; no toxic effects at normal food intake. Non-combustible. No explosion risk.| |---|

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

2.3 Physical and Chemical Hazards

Based on current information: No physical or chemical hazards; stable under normal use conditions; slightly hygroscopic; no flammability, no explosibility, no corrosivity.

2.4 Health Hazards

Based on current information: No acute or chronic health hazards; non-irritating to skin and eyes; no sensitization; no toxic effects at standard food additive use dosages, essential nutrient for human body.

2.5 Environmental Hazards

Based on current information: Environmentally friendly; fully biodegradable; no adverse effects on aquatic/terrestrial organisms; no bioaccumulation potential; no eutrophication risk.

2.6 Other Hazards

No additional hazards identified; fine powder may cause slippery surfaces on hard floors after spillage.

SECTION 3: Composition/Information on Ingredients

- **Substance / Mixture**: Pure chemical substance (food-grade amino sulfonic acid)

3.1 Main Components

表格

Component	Taurine
Formula	$C_2H_7NO_3S$
Molecular Weight	125.15 g/mol
CAS-No.	107-35-7
Concentration (w/w)	≥ 99.0%

Hazardous Ingredients

表格

Component	Classification	Concentration (w/w)
Taurine (Food Grade)	Non-hazardous	≥99.0%
Food-Grade Anticaking Agent (Silicon Dioxide)	Non-hazardous	≤0.5%
Deionized Water (trace)	Non-hazardous	≤0.5%
Total Hazardous Ingredients	None	0%

SECTION 4: First Aid Measures

4.1 Description of First-Aid Measures

- **If Inhaled**: Move victim to fresh air and keep at rest in a comfortable breathing position. No special treatment required if no discomfort; consult a doctor only if coughing persists (rare).
- **In Case of Skin Contact**: Rinse skin thoroughly with running water for 3-5 minutes. Remove contaminated clothing and wash before reuse; no skin irritation expected.
- **In Case of Eye Contact**: Rinse eyes cautiously with plenty of running water for 5 minutes (hold eyes open while rinsing). Remove contact lenses if present. No eye damage or persistent irritation expected; no medical treatment needed.

- **If Swallowed**: Rinse mouth with water and drink a small amount of warm water. Do not induce vomiting. No toxic effects at normal food intake; consult a doctor only if excessive ingestion causes gastrointestinal discomfort (extremely rare).

4.2 Most Important Symptoms and Effects

- **Acute Effects**: No acute toxic or irritating effects on human body under normal use conditions.
- **Delayed Effects**: No known delayed toxic effects based on long-term food, pharmaceutical and feed use data.

4.3 Indication of Any Immediate Medical Attention

No specific medical treatment required for any exposure under normal use conditions.

4.4 Notes to Physician

Inform the physician of the product composition (food-grade Taurine, amino sulfonic acid) if medical consultation is required for excessive ingestion.

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

- **Suitable**: Water spray, foam, carbon dioxide (CO_2), dry chemical powder.
- **Unsuitable**: No limitations of extinguishing agents.

5.2 Special Hazards Arising from the Substance

Non-combustible; decomposes at extreme high temperature (>300℃) to produce non-toxic carbon dioxide, water, nitrogen and sulfur dioxide; no hazardous combustion gases generated under normal fire conditions.

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.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions

Wear nitrile rubber gloves and non-slip shoes for large spills; FFP1 dust mask is optional for heavy dust generation; ensure good ventilation at the spill site.

6.2 Environmental Precautions

No special environmental precautions; 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 Methods for Containment and Cleaning Up

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

6.4 Reference

For disposal, see Section 13.

SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling

- Operate in a well-ventilated area; use dust suppression measures (mist spray) to avoid fine powder formation/inhalation during mixing/transfer.
- Avoid contact with strong oxidizing agents and extreme high temperature (>300℃) to prevent slight decomposition.
- **Hygiene Measures**: Wash hands thoroughly with soap and water after handling; do not eat/drink/smoke while operating the product (follow food hygiene operation standards); no special hygiene restrictions for food grade production.

7.2 Conditions for Safe Storage

- **Storage Conditions**: Store in a cool, dry, well-ventilated warehouse; keep container tightly sealed to prevent moisture absorption, caking and contamination; storage temperature ≤ 25℃, relative humidity ≤ 60%.
- **Incompatibilities**: Strong oxidizing agents (hydrogen peroxide, chlorine-based disinfectants), concentrated strong acids (fuming sulfuric acid).
- **Storage Class (TRGS 510)**: 13 (Non-Hazardous Solids)
- **Shelf Life**: 36 months (unopened, under specified storage conditions); 12 months after opening (seal tightly, store in dry environment).

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

No specific occupational exposure limit (OEL) for Taurine; follow general food additive dust exposure limits (TWA 10 mg/m³) and national food hygiene operation standards.

8.2 Exposure Controls

- **Engineering Controls**: Local exhaust ventilation (LEV) for large-scale processing; dust collection system to reduce airborne powder concentration; dehumidification equipment to maintain low humidity in storage/processing area.
- **Personal Protective Equipment (PPE)**:
  - Eye/Face Protection: Safety goggles with side shields recommended for bulk handling/mixing to avoid powder splashing into eyes (no irritation risk).
  - Skin Protection: Nitrile rubber gloves (food grade, thickness ≥0.11 mm) for prolonged contact; disposable protective clothing optional for large-scale production.
  - Respiratory Protection: FFP1 dust mask for regular bulk handling; no respiratory protection required for small-scale use.
  - Foot Protection: Non-slip food-grade safety shoes for all handling operations to avoid slipping on spilled powder.
  - Hygiene: Provide food-grade hand washing facilities with pure water and soap at the workplace.

SECTION 9: Physical and Chemical Properties

a) Physical State: Crystalline powderb) Color: White to off-whitec) Odor: Odorlessd) Taste: Slightly sweete) Melting Point: 305-310℃ (decomposes)f) Boiling Point: Not applicable (decomposes before boiling)g) Flammability: Non-combustibleh) Flammability Limits: Not applicablei) Flash Point: Not applicablej) Autoignition Temperature: > 400℃k) Decomposition Temperature: ≥ 300℃l) pH Value (25℃, 5% aqueous solution): 4.0-6.0m) Viscosity: N/A (solid); 3-5 mPa·s (10% aqueous solution, 25℃)n) Solubility: Freely soluble in water (≈100 g/L at 25℃); slightly soluble in ethanol; insoluble in ether, chloroform, benzeneo) Partition Coefficient (log Kow): -3.2 (hydrophilic)p) Vapor Pressure (25℃): Negligible (< 0.0001 hPa)q) Density (25℃, solid): 1.73 g/cm³r) Bulk Density: 0.7-1.0 g/cm³s) Hygroscopy: Slightly hygroscopict) Explosive Properties: Not explosiveu) Oxidizing Properties: Nonev) Reducing Properties: None

SECTION 10: Stability and Reactivity

10.1 Chemical Stability

Stable under recommended storage/use conditions (≤25℃, dry, sealed); extremely stable in food system pH (2.0-8.0); no decomposition in high temperature food processing (≤121℃, sterilization).

10.2 Possibility of Hazardous Reactions

No hazardous reactions under normal food production and use conditions; no polymerization; slight decomposition only in extreme high temperature (>300℃) or with strong oxidizing agents.

10.3 Conditions to Avoid

Extreme high temperature (>300℃), direct contact with strong oxidizing agents, prolonged exposure to high humidity (caking risk).

10.4 Incompatible Materials

Concentrated strong oxidizing agents, fuming sulfuric acid, high-concentration peroxides.

10.5 Hazardous Decomposition Products

No hazardous decomposition products under normal use; decomposes into non-toxic carbon dioxide, water, nitrogen and trace sulfur dioxide only at >300℃.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

- **Acute Toxicity**: Oral (Rat, LD_{50}) > 10,000 mg/kg (practically non-toxic); Dermal (Rabbit, LD_{50}) > 20,000 mg/kg; Inhalation (Rat, LC_{50}) > 20 mg/m³ (4-hour exposure)
- **Skin Corrosion/Irritation**: No irritation (Rabbit test, 24-hour exposure, food grade).
- **Serious Eye Damage/Irritation**: No irritation (Rabbit test, 24-hour exposure; no adverse effect).
- **Respiratory/Skin Sensitization**: No sensitizing effects reported in long-term human and animal use tests.
- **Germ Cell Mutagenicity**: No mutagenic effects (Ames test, chromosome aberration test, micronucleus test).

- **Carcinogenicity**: IARC Class 3 (not classifiable as to its carcinogenicity to humans); recognized as a safe food additive by FDA/FAO/WHO, GRAS certified.
- **Reproductive Toxicity**: No adverse reproductive effects in animal tests; essential nutrient for fetal brain development and infant growth.
- **Specific Target Organ Toxicity**: No target organ toxicity; essential nutrient for human body, participates in bile acid synthesis, nervous system regulation and antioxidant defense.
- **Aspiration Hazard**: Low (crystalline powder, moderate bulk density, no aspiration risk for humans/animals).

11.2 Additional Information

Taurine is a naturally occurring amino sulfonic acid, an essential nutrient for humans (especially infants) and animals; approved as a food additive by FAO/WHO/Codex Alimentarius; long-term food, beverage and pharmaceutical use data confirm its high safety, no toxic side effects at normal intake.

SECTION 12: Ecological Information

12.1 Toxicity

- Fish (Zebrafish, LC_{50}): > 10,000 mg/L (96-hour exposure)
- Daphnia (EC_{50}): > 5000 mg/L (48-hour exposure)
- Algae (EC_{50}): > 10,000 mg/L (72-hour exposure)No toxic effects on aquatic organisms; serves as a nutrient supplement for aquatic microorganisms.

12.2 Persistence and Degradability

Fully biodegradable (BOD_5 /COD > 0.9) in aquatic/soil environments; degraded by microorganisms into small molecular nutrients and inorganic substances within 2-3 days; no residual pollution.

12.3 Bioaccumulative Potential

None; Taurine is a water-soluble small molecule, rapidly metabolized and utilized by all organisms; no bioaccumulation in aquatic/terrestrial organisms or food chain.

12.4 Mobility in Soil

High mobility (freely soluble in water); readily dissolves in soil water, but rapidly degraded by soil microorganisms; no long-term soil accumulation, no groundwater pollution risk.

12.5 PBT/vPvB Assessment

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

12.6 Endocrine Disrupting Properties

No endocrine disrupting effects reported in standard tests and long-term food use data.

12.7 Other Adverse Effects

No known adverse ecological impacts; environmentally benign, acts as a microbial nutrient in natural environment.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

- **Product Waste**: Uncontaminated waste can be reused as food/feed additive or nutritional supplement; contaminated waste can be disposed of as non-hazardous solid waste in accordance with local/national food safety regulations; aqueous waste can be directly treated by biological wastewater treatment systems.
- **Packaging Waste**: Rinse empty containers thoroughly with pure water (rinse water can be used for food/feed preparation if qualified); dispose of rinsed packaging as food-grade non-hazardous waste or recycle (HDPE/paper/aluminum foil packaging).

13.2 Disposal Notes

Incineration is not recommended (wastes a valuable nutrient resource); landfilling is acceptable and the product will biodegrade in soil, serving as a nutrient for soil microorganisms; no special disposal requirements for food grade Taurine waste.

SECTION 14: Transport Information

14.1 UN Number

ADR/RID: -; IMDG: -; IATA-DGR: -

14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods; IMDG: Not dangerous goods; IATA-DGR: Not dangerous goods

14.3 Transport Hazard Class(es)

ADR/RID: -; IMDG: -; IATA-DGR: -

14.4 Packaging Group

ADR/RID: -; IMDG: -; IATA-DGR: -

14.5 Environmental Hazards

ADR/RID: No; IMDG Marine Pollutant: No; IATA-DGR: No

14.6 Special Precautions for User

Transport at ≤ 25℃; use sealed, moisture-proof packaging; avoid rain, moisture, direct sunlight and package collision during transport; prevent powder leakage and caking; use pallets for loading to avoid ground contact and contamination.

14.7 Incompatible Materials

Avoid transport with strong oxidizing agents, concentrated strong acids and non-food grade hazardous chemicals.**Further Information**: Classified as non-dangerous goods under international transport regulations; comply with food additive transport hygiene and safety standards, no special transport requirements.

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)
- Food Hygiene Law of the People's Republic of China
- National Food Safety Standard for Infant Formula Food (GB 10765/GB 10767)

15.2 International Regulations

- GHS Classification (Rev. 9): Non-hazardous
- REACH (EU): Registered; not listed in SVHC Candidate List; complies with EC 1333/2008 (food additives)
- TSCA (US): Listed on the TSCA Inventory; GRAS certified by FDA (21 CFR 184.1256)
- Codex Alimentarius (FAO/WHO): Approved as food nutritional fortifier (Codex STAN 192-1995)

15.3 Other Regulations

Comply with local food safety, environmental protection and transport regulations; follow the maximum addition limit of nutritional fortifiers in food products specified by national and international standards; no special regulatory restrictions for Taurine in food industry.

SECTION 16: Other Information

16.1 Further Information

This MSDS is based on current scientific knowledge and complies with GB/T 16483, GB/T 17519, GHS, IMDG and IATA standards. It is intended for the safe handling, storage, transport and disposal of food-grade Taurine. The supplier is not liable for any damage caused by improper use, non-compliance with safety precautions or violation of national food additive use standards.

16.2 Revision History

First version (26 FEB 2026)

纳维盈医化科技
NEWAY SINOPHC TECH