



# 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)

(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)

### Butyl Acetate (123-86-4)

Revision Date: 28 FEB 2026

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

#### 1.1 Product Identifiers

- Product Name: Butyl Acetate
- Product Number: BA-20260228
- Brand: SIGALD
- CAS-No.: 123-86-4
- Synonyms: n-Butyl acetate; Butyl ethanoate; Acetic acid n-butyl ester
- EINECS/EC-No.: 204-658-1

#### 1.2 Details of the supplier of the safety data sheet

- 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: Industrial solvent (paints, inks, adhesives); food flavor adjuvant (fruity flavor); cosmetic solvent; chemical synthesis intermediate; coating diluent.
- Uses Advised Against: Not for direct oral consumption in large quantities; avoid use near open flames without explosion-proof protection; do not mix with strong oxidizing agents.

### SECTION 2: Hazards Identification

| Summary of Emergency Measures | Colorless clear volatile liquid with characteristic fruity ester odor. Flammable liquid; vapor may form explosive mixtures with air; may cause mild skin and eye irritation; high-concentration vapor causes respiratory and central nervous system irritation. After inhalation: Move to fresh air and rest. In case of skin contact: Rinse with plenty of water and soap. After eye contact: Rinse with plenty of water for 15 minutes; consult a doctor if irritation persists. After swallowing: Rinse mouth with water, do not induce vomiting; seek medical advice. Keep away from fire, heat sources and oxidizing agents. | |---|

#### 2.1 GHS Classification

- Flammable liquids (Category 3)
- Skin irritation (Category 2)
- Serious eye irritation (Category 2)
- Specific target organ toxicity - single exposure (respiratory tract irritation, Category 3)
- Specific target organ toxicity - single exposure (central nervous system, Category 3)



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### 2.2 GHS Label Elements

- Hazard Pictogram: (Flame, Exclamation mark)
- Signal Word: **Warning**
- Hazard Statements:
  - H226: Flammable liquid and vapor
  - H315: May cause skin irritation
  - H319: May cause serious eye irritation
  - H335: May cause respiratory irritation
  - H336: May cause drowsiness or dizziness
- Precautionary Statements:
  - P210: Keep away from heat, sparks, open flames and hot surfaces. No smoking.
  - P233: Keep container tightly closed.
  - P240: Ground and bond container and receiving equipment.
  - P241: Use explosion-proof electrical/ventilating/lighting equipment.
  - P261: Avoid breathing dust/fumes/gas/mist/vapors/spray.
  - P264: Wash skin thoroughly after handling.
  - P280: Wear protective gloves/eye protection/face protection.
  - P302+P352: If on skin: Wash with plenty of water and soap.
  - P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
  - P312: Call a POISON CENTER or doctor/physician if you feel unwell.
  - P337+P313: If eye irritation persists: Get medical advice/attention.
  - P362+P364: Take off contaminated clothing and wash it before reuse.
  - P403+P235: Store in a well-ventilated place. Keep cool.
  - P501: Dispose of contents/container to an approved waste disposal plant.

2.3 Physical and Chemical Hazards Flammable liquid (flash point 22°C); vapor forms explosive mixtures with air (LEL 1.2%, UEL 7.5%); vapor is heavier than air and may accumulate in low-lying areas causing fire/explosion risk; stable under normal storage conditions, no hazardous polymerization.

### 2.4 Health Hazards

- Acute: High-concentration vapor causes cough, throat irritation, dizziness, drowsiness and headache; skin contact causes mild redness and dryness; eye contact causes redness, tearing and blurred vision; accidental swallowing causes nausea, abdominal pain and diarrhea.
- Chronic: Prolonged inhalation of low-concentration vapor may cause chronic headache and fatigue; repeated skin contact may cause mild dermatitis; no known carcinogenic, mutagenic or reproductive toxic effects.



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2.5 Environmental Hazards Low acute toxicity to aquatic organisms (Zebrafish 96h LC<sub>50</sub> = 180-250 mg/L); readily biodegradable in natural environment (BOD<sub>5</sub> /COD = 0.78); slight bioaccumulation potential (log P=2.0); avoid direct discharge into water bodies or soil.

2.6 Other Hazards Vapor may cause narcosis at high concentration; rapid evaporation may cause skin frostbite; no other additional hazards identified.

### SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: **Pure Substance** | Component | CAS-No. | Formula | Concentration (w/w) | Classification | |---|---|---|---|---| | Butyl Acetate | 123-86-4 | C<sub>6</sub> H<sub>12</sub>O<sub>2</sub> | ≥99.0% (Food ≥99.5%) | H226, H315, H319, H335, H336 |

### SECTION 4: First Aid Measures

#### 4.1 Description of First-Aid Measures

- If Inhaled: Immediately move the victim to fresh, well-ventilated air. Loosen tight clothing to ensure unobstructed breathing. Let the victim rest in a semi-recumbent position. Call a doctor if dizziness, cough or chest tightness persists.
- In Case of Skin Contact: Immediately remove contaminated clothing and shoes. Rinse the affected skin with plenty of running water and neutral soap for at least 5 minutes. Pat dry gently; apply mild moisturizer for dryness. Seek medical attention if redness or itching occurs.
- In Case of Eye Contact: Hold the eyelids open and rinse the eyes continuously with clean running water for at least 15 minutes, flushing the entire eye surface (including under the eyelids). Do not rub the eyes. Remove contact lenses only if it can be done easily. Consult an ophthalmologist if irritation, blurred vision or pain persists.
- If Swallowed: Rinse the mouth with plenty of clean water (do not swallow). Do not induce vomiting (risk of aspiration into the respiratory tract). If the victim is conscious, drink a small amount of warm water to dilute the substance. Call a POISON CENTER or doctor immediately if gastrointestinal discomfort occurs.
- Frostbite from Rapid Evaporation: Warm the affected area with lukewarm water (37-39°C); apply anti-frostbite ointment and seek medical attention.

#### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed

- Acute: Respiratory tract irritation, dizziness, drowsiness, skin/eye irritation, gastrointestinal discomfort; all symptoms are reversible with prompt treatment.
- Delayed: Transient skin dryness or peeling (1-2 days after contact); persistent headache for 1-2 days after high-concentration vapor inhalation.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed No specific antidote available; treat symptomatically. Seek urgent medical attention for severe central nervous system depression (drowsiness, loss of consciousness), severe eye irritation or large-dose accidental swallowing.

### SECTION 5: Firefighting Measures

#### 5.1 Extinguishing Media



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- Suitable: Carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam (alcohol-resistant), dry sand.
- Unsuitable: Do not use a direct high-pressure water jet (may spread the fire and dilute the product into flammable mixtures).

5.2 Special Hazards Arising from the Substance or Mixture Combustible liquid with highly volatile vapor; burning produces toxic smoke (carbon monoxide, carbon dioxide, ester fumes); vapor may spread to fire source and cause backfire; no explosive decomposition during combustion.

### 5.3 Advice for Firefighters

- Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear (fire-resistant suit, chemical-resistant gloves, goggles, anti-static boots).
- Keep a safe distance from the fire scene; cool the burning and surrounding containers with water spray to prevent thermal expansion and rupture.
- Prevent fire-extinguishing wastewater from entering municipal sewers, rivers, lakes or other water bodies.
- Extinguish the fire from the upwind direction; eliminate all ignition sources in the fire scene and surrounding area; ventilate low-lying areas to remove accumulated vapor.

## SECTION 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures Wear full personal protective equipment (chemical-resistant goggles, nitrile rubber gloves, organic vapor respirator, anti-static work clothes). Eliminate all ignition sources (turn off electrical equipment, no smoking, use non-sparking tools) in the spill area. Ensure good ventilation (use explosion-proof exhaust fans); evacuate non-essential personnel to a safe upwind area. Avoid inhaling vapor and direct skin/eye contact; do not walk through or touch the spilled liquid.

6.2 Environmental Precautions Prevent the spilled liquid from entering sewers, storm drains, rivers, lakes, soil or groundwater. Build dikes with inert materials (sand, vermiculite) to contain the spilled liquid for small/medium spills; use floating booms for water surface spills.

### 6.3 Methods and Materials for Containment and Cleaning Up

- Small Spill: Absorb the spilled liquid with inert absorbent materials (diatomite, activated carbon, oil-absorbing cotton); collect the absorbent into a sealed explosion-proof HDPE container with hazard labels; wipe the spill area with ethanol and dispose of the waste cloth in the same container.
  - Large Spill: Contain the liquid with dikes and sandbags; transfer the spilled liquid to a sealed explosion-proof HDPE drum with a non-sparking pump; clean the remaining liquid with oil-absorbing materials and dispose of all waste as hazardous waste.
- 6.4 Reference to Other Sections For waste disposal, see Section 13; for personal protection, see Section 8.

## SECTION 7: Handling and Storage

7.1 Precautions for Safe Handling Operate in a well-ventilated explosion-proof area with local exhaust ventilation (air exchange rate  $\geq 15$  times/hour) for vapor collection. Wear specified PPE for all operations. Eliminate all ignition sources in the working area; no smoking, open flames or

hot surfaces. Use anti-static equipment and non-sparking tools; ground and bond all containers and transfer lines. Avoid generating vapor, spray or mist; use closed transfer systems for bulk handling. Do not mix with strong oxidizing agents, strong acids or strong alkalis. Wash hands, face and exposed skin thoroughly with soap and water after handling; do not eat, drink or smoke in the working area.

## 7.2 Conditions for Safe Storage

- Storage Conditions: Store in a cool, dry, well-ventilated explosion-proof warehouse. Temperature  $\leq 25^{\circ}\text{C}$ , relative humidity  $\leq 60\%$ . Keep the container tightly sealed with an anti-static screw cap to prevent vapor volatilization and contamination; store in original explosion-proof HDPE or glass containers. Keep away from fire, heat sources, direct sunlight and electrical equipment.
- Incompatibilities: Strong oxidizing agents ( $\text{H}_2\text{O}_2$ ,  $\text{KMnO}_4$ , chlorine), strong mineral acids ( $\text{HCl}$ ,  $\text{H}_2\text{SO}_4$ ), strong alkalis ( $\text{NaOH}$ ,  $\text{KOH}$ ), halogens, peroxides.
- Storage Class (TRGS 510): 3 (Flammable Liquids, Category 3)
- Shelf Life: **18 months (unopened, under specified storage conditions)**
- Segregation: Store separately from incompatible materials in a dedicated explosion-proof storage area with anti-leakage trays and fire-fighting equipment; keep a minimum distance of 5 meters from heat sources and ignition sources; mark clear hazard labels (flammable liquid, skin/eye irritation) on the storage area and containers.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

- Occupational Exposure Limit (OEL) for Butyl Acetate: TWA 150 ppm ( $710 \text{ mg/m}^3$ , 8-hour, ACGIH); STEL 200 ppm ( $950 \text{ mg/m}^3$ , 15-minute, ACGIH)
- Biological Limit Value (BLV): N/A

### 8.2 Exposure Controls

- Engineering Controls: Explosion-proof electrical equipment and lighting; local exhaust ventilation system; fire-fighting equipment ( $\text{CO}_2$  fire extinguisher, foam fire extinguisher) in the working area; vapor concentration detection alarm (set alarm limit at 150 ppm); anti-static ground system.
- Personal Protective Equipment (PPE) - **MANDATORY for all operations:**
  - Eye/Face Protection: Chemical-resistant safety goggles for routine handling; full face shield for bulk operations or spill cleanup.
  - Skin Protection: Nitrile rubber gloves (thickness  $\geq 0.30 \text{ mm}$ ), chemical-resistant neoprene apron, anti-static work clothes; replace gloves immediately if damaged or contaminated.
  - Respiratory Protection: Organic vapor respirator (OV cartridge) for routine operations; full-face SCBA with organic vapor filter for confined space or large spill emergency.
  - Other: Anti-static work shoes, safety goggles; keep emergency eye wash station and safety shower within 10 meters of the work area.

## SECTION 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties  
a) Physical State: Clear volatile liquid  
b) Color: Colorless  
c) Odor: Characteristic sweet fruity ester (pear/apple) odor  
d) Melting Point/Freezing Point: -77.9°C  
e) Boiling Point: 124-127°C (760 mmHg)  
f) Flammability (Liquid/Gas): Flammable liquid (Category 3)  
g) Upper/Lower Flammability or Explosive Limits: Lower: 1.2% (v/v); Upper: 7.5% (v/v) (20°C)  
h) Flash Point: 22°C (Closed Cup); 31°C (Open Cup)  
i) Autoignition Temperature: 421°C  
j) Decomposition Temperature: ≥200°C (no hazardous decomposition)  
k) pH Value: Neutral (6.8-7.2, 25°C, 5% aqueous solution)  
l) Viscosity (25°C): 0.73 mPa·s  
m) Water Solubility: Slightly soluble (1 g/100 mL at 20°C); miscible with ethanol, ether, acetone, benzene and most organic solvents  
n) Partition Coefficient (log P, n-octanol/water): 2.0 (25°C)  
o) Vapor Pressure (25°C): 1.3 kPa  
p) Relative Density (20/20°C): 0.878-0.883  
q) Relative Vapor Density (air=1): 4.0  
r) Evaporation Rate (butyl acetate=1): 1.0 (reference)  
s) Explosive Properties: No explosive properties under normal conditions; vapor-air mixture is explosive  
t) Oxidizing Properties: None

9.2 Other Safety Information  
Low viscosity and high volatility make it an excellent industrial solvent; rapid evaporation at room temperature; no crystallization at normal low temperature (> -77.9°C); compatible with most resins, pigments and food/cosmetic raw materials under normal formulation conditions.

## SECTION 10: Stability and Reactivity

10.1 Chemical Stability: Stable under the recommended storage and handling conditions (≤25°C, sealed, away from light and ignition sources); no chemical changes under normal industrial processing conditions; stable in neutral and weakly acidic/basic systems (pH 5.0-9.0).

10.2 Possibility of Hazardous Reactions: No hazardous reactions under normal use and processing conditions; hydrolyzes slowly in strong acid/alkali at high temperature to produce acetic acid and n-butanol; no hazardous polymerization occurs under any conditions.

10.3 Conditions to Avoid: High temperature (>200°C), direct sunlight, open flame, heat sources, contact with incompatible materials, prolonged exposure to air (no significant degradation).

10.4 Incompatible Materials: Strong oxidizing agents, strong mineral acids, strong alkalis, halogens, peroxides, strong reducing agents.

10.5 Hazardous Decomposition Products: Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), acetic acid vapor, n-butanol vapor (high-temperature decomposition/combustion); no other hazardous decomposition products.

## SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

- Acute Toxicity:
  - Oral (Rat, LD<sub>50</sub>): 14130 mg/kg (Very low toxic)
  - Dermal (Rabbit, LD<sub>50</sub>): >20000 mg/kg (Very low toxic)
  - Inhalation (Rat, LC<sub>50</sub>): 20000 ppm/4h (Low toxic)

- Skin Corrosion/Irritation: Rabbit 4-hour closed patch test - mild erythema and dryness (Category 2), reversible with proper treatment.
- Serious Eye Damage/Irritation: Rabbit eye test - moderate conjunctival redness and tearing (Category 2), reversible with prompt flushing.
- Respiratory or Skin Sensitization: No sensitizing effects (human and animal tests).
- Germ Cell Mutagenicity: Ames test, chromosome aberration test - negative; no mutagenic effects.
- Carcinogenicity: IARC Classification - Group 3 (not classifiable as to carcinogenicity to humans); no carcinogenic effects in long-term animal tests.
- Reproductive Toxicity: No adverse reproductive or developmental effects in animal tests at occupational exposure doses; no teratogenic or embryotoxic effects.
- Specific Target Organ Toxicity (Repeated Exposure): 90-day repeated inhalation test - mild liver and kidney weight change at high concentration; no organ damage at occupational exposure limit.
- Aspiration Hazard: Low (low viscosity, but vapor inhalation is the main risk).

## SECTION 12: Ecological Information

### 12.1 Toxicity

- Fish (Zebrafish, 96h LC<sub>50</sub>): 220 mg/L
  - Daphnia (48h EC<sub>50</sub>): 190 mg/L
  - Freshwater Algae (72h EC<sub>50</sub>): 250 mg/L
- 12.2 Persistence and Degradability: Readily biodegradable (BOD<sub>5</sub> /COD = 0.78); degraded by microbial action in natural environment within 3-5 days; no persistent environmental residues.
- 12.3 Bioaccumulative Potential: Slight (log P=2.0); no biomagnification in the food chain.
- 12.4 Mobility in Soil: Moderate mobility; may leach to groundwater in high concentration; easily adsorbed to soil organic matter at normal concentration.
- 12.5 PBT/vPvB Assessment: Not classified as PBT/vPvB substances (no persistence, slight bioaccumulation, low aquatic toxicity).
- 12.6 Other Adverse Effects: No known adverse effects on soil microorganisms or terrestrial ecosystems at normal environmental concentrations; excessive discharge may cause temporary water body oxygen depletion.

## SECTION 13: Disposal Considerations

### 13.1 Waste Treatment Methods

- Product Waste: Expired/contaminated Butyl Acetate is classified as **hazardous waste (flammable liquid, mild toxicity)**; dispose of by licensed hazardous waste treatment facilities via incineration (≥800°C) with flue gas treatment (to remove organic vapors). Do not discharge to the environment directly.
- Packaging Waste: Rinse packaging with a small amount of ethanol (collect rinsing waste as hazardous waste); dispose of contaminated packaging as hazardous waste; recycle clean and uncontaminated HDPE/glass packaging after thorough cleaning and testing.



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- Spill Waste: Contaminated absorbent materials, cleaning tools and waste liquid are hazardous waste; collect and dispose of by licensed hazardous waste treatment companies in accordance with local regulations.
- Disposal Compliance: Comply with China HW06 (Organic Solvent Waste), EU EWC 030201, US RCRA Subtitle C (Hazardous Waste).

### SECTION 14: Transport Information

14.1 UN Number: ADR/RID: 1123; IMDG: 1123; IATA-DGR: 1123  
14.2 UN Proper Shipping Name: ADR/RID: Butyl acetate; IMDG: Butyl acetate; IATA-DGR: Butyl acetate  
14.3 Transport Hazard Class(es): ADR/RID: 3; IMDG: 3; IATA-DGR: 3  
14.4 Packaging Group: ADR/RID: II; IMDG: II; IATA-DGR: II  
14.5 Environmental Hazards: IMDG Marine Pollutant: **No**  
14.6 Special Precautions for Transport  
Transport in sealed explosion-proof HDPE plastic drums or glass bottles with anti-leakage and anti-static caps; fill the container with inert gas (nitrogen) for bulk transport to reduce vapor volatilization. Transport temperature  $\leq 30^{\circ}\text{C}$ , avoid direct sunlight, heat sources and open flames; the transport vehicle must be explosion-proof with anti-static ground wire and fire-fighting equipment ( $\text{CO}_2$ /foam fire extinguisher). Do not transport with strong oxidizing agents, strong acids, strong alkalis or food/cosmetic raw materials; transport in a dedicated compartment with anti-leakage trays; no mixed loading of other hazard classes. Comply with ADR/RID, IMDG Code and IATA-DGR regulations for Class 3 flammable liquids; provide MSDS/COA for customs clearance and transport documentation.

### SECTION 15: Regulatory Information

15.1 National/International Regulations

- China: Hazardous Chemicals Safety Management Regulation (Class 3 Flammable Liquid); National Food Safety Standard (GB 2760-2021, approved as food flavor adjuvant); Organic Solvent Industrial Standard.
- EU: REACH (Annex XVII compliant, not in SVHC Candidate List); CLP (GHS Classification - Warning); Food Additive Regulation (EC 1333/2008, approved as food flavor); ADR/RID Class 3 Transport Regulation.
- US: TSCA (listed on the TSCA Inventory); FDA GRAS (Generally Recognized As Safe) for food use; FDA Cosmetic Ingredient Review (CIR) approved; OSHA Hazard Communication Standard (29 CFR 1910.1200); DOT Class 3 Transport Regulation.
- International: ISO 9001 (Quality); ISO 14001 (Environment); FAO/WHO Food Additive Standards; Codex Alimentarius Commission Standards.

15.2 Additional Regulatory Requirements  
Provide English MSDS/COA for customs clearance and transport; mark **Class 3 Flammable Liquid, FOR INDUSTRIAL/FOOD/COSMETIC USE ONLY, KEEP AWAY FROM FIRE** on all product documents and packaging; comply with food/cosmetic additive dosage limits (GB 2760, EU 1333/2008); label products with flammable, skin/eye irritation warnings for industrial use; affix anti-static and explosion-proof marks on all packages.

### SECTION 16: Other Information



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- Further Information: This MSDS complies with GB/T 16483, GB/T 17519 and GHS Rev.9 standards, and is for professional use only by trained personnel (production, storage, transport and disposal). Key characteristic: **Butyl Acetate (≥99.0%) colorless volatile liquid, Class 3 flammable liquid, mild skin/eye/respiratory irritation, sweet fruity ester odor, for industrial solvent, food flavor adjuvant, cosmetic solvent and chemical synthesis use.**
- Revision Date: 28 FEB 2026

