Safety Data Sheet (MSDS)

- Benzyl Alcohol

*(According to GB/T 16483 and GB/T 17519; Adapts to GHS, IMDG, IATA Standards)***Revision Date**: 20 FEB 2026

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

1.1 Product Identifiers

- Product Name: Benzyl Alcohol
- Product Number: BA-20260220
- Brand: SIGALD
- CAS-No.: 100-51-6
- Synonyms: Phenylmethanol; Benzenemethanol
- Formula: C_7H_8O
- Molecular Weight: 108.14 g/mol

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**: Cosmetic preservative and solvent; pharmaceutical intermediate; fragrance raw material; industrial solvent for coatings, inks and adhesives; food additive (flavoring agent).
- **Uses Advised Against**: Not for use as a fuel; avoid excessive skin contact in cosmetic formulations for sensitive skin.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Skin Irritation (Category 2)
- Eye Irritation (Category 2)
- Specific Target Organ Toxicity - Single Exposure (Category 3, Central nervous system)
- Hazardous to the aquatic environment - Acute (Category 3)
- Hazardous to the aquatic environment - Chronic (Category 3)

2.2 GHS Label Elements

- Hazard Pictogram: (Exclamation mark), (Environment)
- Signal Word: **Warning**
- **Hazard Statements**:
  - H315: Causes skin irritation
  - H319: Causes serious eye irritation
  - H336: May cause drowsiness or dizziness
  - H412: Harmful to aquatic life with long lasting effects
- **Precautionary Statements**:
  - P261: Avoid breathing dust/fume/gas/mist/vapors/spray
  - P264: Wash hands thoroughly after handling
  - P273: Avoid release to the environment
  - P280: Wear protective gloves/eye protection/face protection
  - P302+P352: If on skin: Wash with plenty of soap and water

- P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P337+P313: If eye irritation persists: Get medical advice/attention
- P391: Collect spillage
- P403+P233: Store in a well-ventilated place. Keep container tightly closed

2.3 Physical and Chemical Hazards

- Combustible liquid (flash point ≥ 90℃); no explosion risk under normal use and storage conditions.
- No hazardous polymerization under normal conditions.

2.4 Health Hazards

- **Acute**: Mild skin/eye irritation; inhalation of high concentration vapors may cause drowsiness, dizziness and headache; oral ingestion may cause nausea, vomiting and abdominal pain.
- **Chronic**: No known chronic toxic effects with normal occupational and cosmetic use; prolonged skin contact may cause mild dermatitis in sensitive individuals.

2.5 Environmental Hazards

- Harmful to aquatic organisms with long-lasting effects; low bioaccumulation potential in the food chain.
- Biodegradable in aerobic aquatic environments with sufficient time.

2.6 Other Hazards

- No additional hazards identified.

SECTION 3: Composition/Information on Ingredients

- **Substance / Mixture**: Pure Substance
- **Active Ingredient**: Benzyl Alcohol (100-51-6), Concentration: 99.5-99.9% (w/w)
- No hazardous impurities present above threshold limits.

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 position comfortable for breathing. If symptoms (dizziness, drowsiness) persist, consult a doctor.
- **In Case of Skin Contact**: Remove contaminated clothing and shoes. Wash skin with plenty of soap and running water for 10-15 minutes. If irritation or rash occurs, get medical advice.
- **In Case of Eye Contact**: Rinse eyes thoroughly with plenty of running water for 10-15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. If irritation persists, immediately consult an ophthalmologist.
- **If Swallowed**: Rinse mouth with water. Do not induce vomiting. If large quantity is swallowed or gastrointestinal discomfort occurs, seek medical attention immediately and show the product label/MSDS.

4.2 Most Important Symptoms and Effects

- **Acute**: Skin redness, itching; eye redness, burning; dizziness, drowsiness (inhalation); nausea, abdominal pain (ingestion).
- **Delayed**: No known delayed toxic effects.

4.3 Indication of Immediate Medical Attention

- Seek medical help if eye/skin irritation persists, high concentration inhalation causes severe dizziness, or large quantity is ingested.

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

- **Suitable**: Water spray (cool container), dry chemical powder, foam, carbon dioxide (CO_2).
- **Unsuitable**: No unsuitable extinguishing media identified.

5.2 Special Hazards Arising from the Substance

- Combustion may produce minor toxic fumes (carbon monoxide, carbon dioxide, aromatic compounds).
- No explosive decomposition under fire conditions.

5.3 Advice for Firefighters

- Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective gear when fighting fires involving large quantities.
- Cool exposed containers with water spray to prevent rupture from heat.
- Fight fire from a safe distance; avoid inhalation of combustion fumes.

SECTION 6: Accidental Release Measures

6.1 Personal Precautions

- Wear nitrile rubber gloves, chemical safety goggles and protective clothing. Avoid breathing vapors or contact with skin/eyes. Ensure good ventilation in the spill area.
- Evacuate non-essential personnel from the affected area.

6.2 Environmental Precautions

- Prevent spillage from entering drains, sewers, rivers, lakes or other water bodies. Contain runoff with sand or inert absorbent if necessary.
- Do not discharge contaminated water into the environment without treatment.

6.3 Methods and Materials for Containment and Cleaning Up

- **Small Spill**: Absorb with inert material (sand, diatomaceous earth, vermiculite). Place absorbed material in sealed plastic bags for proper disposal. Wipe the area with a water-moistened cloth and ventilate until the vapor is gone.
- **Large Spill**: Contain with dikes or bunds to prevent spreading. Transfer the liquid to a sealed, labeled container using an explosion-proof pump. Dispose of waste in accordance with local, national and international regulations.

6.4 Reference to Other Sections

For 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 area; avoid generating vapors or aerosols. Use explosion-proof equipment if handling large quantities (due to combustible nature).
- Do not eat, drink or smoke while handling the product. Wash hands and face thoroughly with soap and water after use.
- Avoid direct contact with skin, eyes and respiratory tract.

7.2 Conditions for Safe Storage

- **Storage Temperature**: 5-30℃ (cool, dry place); avoid extreme heat and direct sunlight.
- **Container**: Sealed glass, HDPE plastic or stainless steel containers; keep tightly closed when not in use to prevent evaporation and contamination.
- **Incompatibilities**: Strong oxidizing agents (e.g., hydrogen peroxide, chlorine), strong acids, strong bases, halogens, anhydrides.
- **Storage Class (TRGS 510)**: 10 (Combustible Organic Liquids)
- **Shelf Life**: 36 months (unopened, under specified storage conditions).

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

- **Occupational Exposure Limit (OEL)**:
  - China MAC: 50 mg/m³ (8h TWA)
  - EU TWA: 10 ppm (44 mg/m³), STEL: 20 ppm (88 mg/m³)
  - US OSHA TWA: 50 ppm (220 mg/m³)

8.2 Exposure Controls

- **Engineering Controls**: Local exhaust ventilation (LEV) for large-scale handling; general ventilation for routine use to maintain vapor concentration below OEL.
- **Personal Protective Equipment (PPE)**:
  - **Eye/Face Protection**: Chemical safety goggles (routine handling); face shield (spill or splash risk).
  - **Skin Protection**: Nitrile rubber gloves (thickness ≥ 0.11 mm), chemical-resistant lab coat/overalls; replace gloves if damaged or contaminated.
  - **Respiratory Protection**: Half-face respirator with organic vapor cartridge if vapor concentration exceeds OEL or ventilation is poor; no respiratory protection needed under normal use conditions.
  - **Hand Protection**: Wash gloves before removal; avoid cross-contamination.

SECTION 9: Physical and Chemical Properties

Property	Value	Unit	Test Method
Physical State	Liquid	-	Visual Inspection
Color	Colorless	-	Visual Inspection
Odor	Mild aromatic, floral	-	Sensory Evaluation
Melting Point	-15 to -13	℃	DSC
Boiling Point	203-205	℃	Distillation Method
Flash Point (Closed Cup)	93	℃	Pensky-Martens Method
Autoignition Temperature	436	℃	ASTM E659
Relative Density (20/20℃)	1.043-1.046	g/cm³	Hydrometer Method
Refractive Index (20℃)	1.538-1.540	-	Abbe Refractometer
Viscosity (25℃)	5.8	mPa·s	Rotational Viscometer
Water Solubility	Miscible (42 g/L at 20℃)	g/L	Shake Flask Method
Solubility	Miscible with ethanol, ether, acetone, benzene, oils	-	Visual Inspection
Vapor Pressure (25℃)	0.13	hPa	Static Method
Flammability	Combustible	-	Closed Cup Flash Point
Explosive Limits	1.3-10.6 (v/v)	%	ASTM E681

SECTION 10: Stability and Reactivity

10.1 Chemical Stability

- Stable under normal storage and use conditions (5-30℃, sealed, away from incompatible materials).

10.2 Possibility of Hazardous Reactions

- No hazardous reactions under normal use; may react vigorously with strong oxidizing agents, strong acids and strong bases.
- No hazardous polymerization occurs under normal conditions.

10.3 Conditions to Avoid

- High temperature (> 100℃), direct sunlight, open flame, contact with incompatible materials, excessive heating.

10.4 Incompatible Materials

- Strong oxidizers (hydrogen peroxide, potassium permanganate, chlorine), concentrated sulfuric acid, concentrated nitric acid, sodium hydroxide (concentrated), halogens (Cl_2, Br_2), acid anhydrides.

10.5 Hazardous Decomposition Products

- Under high temperature or combustion: Carbon monoxide (CO), carbon dioxide (CO_2), benzene and other aromatic hydrocarbons; no other toxic decomposition products.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

- **Acute Toxicity**:
  - Oral (Rat, LD_{50}): 1230 mg/kg
  - Dermal (Rabbit, LD_{50}): > 2000 mg/kg
  - Inhalation (Rat, LC_{50}): > 1000 mg/m³ (4h exposure)
- **Skin Irritation (Rabbit)**: Mild irritation (4h exposure) – slight redness, no edema (reversible within 24h).
- **Eye Irritation (Rabbit)**: Moderate irritation (24h exposure) – redness, slight corneal opacity (reversible within 48h).
- **Respiratory Irritation**: Inhalation of high concentration vapors causes mild respiratory tract irritation and central nervous system depression (drowsiness, dizziness).
- **Sensitization**: No skin or respiratory sensitization potential (guinea pig and human patch tests).
- **Carcinogenicity**: Not classified as carcinogenic by IARC, EPA, NTP or EU.
- **Reproductive Toxicity**: No adverse reproductive effects in animal studies at normal use doses; no teratogenic effects identified.
- **Specific Target Organ Toxicity**: Single exposure may affect the central nervous system (drowsiness, dizziness) at high concentrations.

SECTION 12: Ecological Information

- **Aquatic Toxicity**:
  - Zebrafish LC_{50} (96h): 250 mg/L
  - Daphnia EC_{50} (48h): 180 mg/L
  - Algae EC_{50} (72h): 320 mg/L
- **Persistence and Degradability**: Fully biodegradable (BOD_5/COD = 0.75) in aerobic aquatic environments; degrades completely within 28 days.
- **Bioaccumulative Potential**: Log Koc = 1.15, Log Kow = 1.19 – **low bioaccumulation potential**; no biomagnification in the food chain.
- **Mobility in Soil**: High mobility; may leach into groundwater if spilled on soil.
- **Other Adverse Effects**: Harmful to aquatic organisms with long-lasting effects; no known adverse effects on terrestrial ecosystems at normal use levels.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

- **Product Waste**: Dispose of through licensed hazardous waste treatment facilities. Incineration is recommended (with proper emission control for combustion fumes to reduce aromatic hydrocarbon release). Dilute small quantities with water and treat in biological wastewater treatment systems (for industrial facilities with valid permits).
- **Packaging Waste**: Rinse packaging thoroughly with water or ethanol; dispose of as hazardous waste or recycle (if permitted by local regulations). Do not reuse contaminated packaging.
- **General Note**: Comply with local, national and international waste disposal regulations; do not discharge directly into the environment.

SECTION 14: Transport Information

14.1 UN Number & Shipping Name

- ADR/RID: 3082, **Environmentally hazardous substances, liquid, n.o.s.** (Benzyl Alcohol)
- IMDG: 3082, **Environmentally hazardous substances, liquid, n.o.s.**
- IATA-DGR: 3082, **Environmentally hazardous substances, liquid, n.o.s.**

14.2 Transport Hazard Class

- ADR/RID: 9; IMDG: 9; IATA-DGR: 9

14.3 Packaging Group

- III (Minor hazard)

14.4 Environmental Hazards

- IMDG Marine Pollutant: **Yes (P-Symbol)**; ADR/RID: Environmentally hazardous.

14.5 Special Transport Precautions

- Transport in sealed, leak-proof glass/HDPE/stainless steel containers; avoid direct sunlight, heat, open flame and collision during transport.
- Do not transport with strong oxidizers, strong acids, strong bases, food or food additives.
- Label containers with GHS hazard pictograms, product identification and UN number.
- Transport by licensed hazardous chemical carriers in accordance with national and international transport regulations.

SECTION 15: Regulatory Information

15.1 National & International Regulations

- **China**: Complies with *Hazardous Chemical Safety Management Regulation*; listed in *National Cosmetic Raw Material Directory* and *National Food Additive Standard (GB 2760)*.
- **EU (REACH)**: Registered on REACH Inventory; no SVHC (Substances of Very High Concern) classification; compliant with Cosmetics Regulation (EC 1223/2009).
- **US (TSCA)**: Listed on TSCA Inventory; compliant with FDA regulations for cosmetic and food use (21 CFR).
- **IFRA**: Compliant with International Fragrance Association (IFRA) standards for fragrance use in cosmetics.
- **GHS**: Classified in accordance with GHS Rev. 9.

15.2 Other Regulations

- Comply with local air and water pollution prevention and control laws; occupational exposure must meet national OEL standards.

SECTION 16: Other Information

- This MSDS is based on current scientific and technical knowledge, complying with GB/T 16483, GB/T 17519 and international GHS (Rev.9), ADR/RID, IMDG and IATA-DGR standards.
- The supplier is not liable for any damage caused by improper handling, storage, use or non-compliance with the safety precautions stated in this MSDS.
- For additional technical, regulatory or application information, contact the supplier's technical department at +86-021-50350029.