

## Safety Data Sheet (MSDS)

### - Basil Oil

**According to:** GB/T 16483, GB/T 17519; GHS, IMDG, IATA Standards **Product Name:** Basil Oil (Natural Essential Oil) **CAS Number:** 501-53-1 **Product Number:** BO-20260224 **Brand:** SIGALD **Revision Date:** 24 February 2026 **Supplier:** NEWAY SINOPHC TECH. LIMITED **Address:** RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE. **Tel/Fax:** +86-021-50350029 **Emergency Phone:** +86-021-50350029 (CHEMTREC)

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

#### 1.1 Product Identifiers

- Product Name: Basil Oil
- Synonyms: Sweet Basil Oil; Basil Essential Oil; Ocimum Basilicum Oil
- CAS-No.: 501-53-1
- Main Component: Linalool (CAS 78-70-6, ≥60%)
- Product Number: BO-20260224
- Brand: SIGALD

#### 1.4 Relevant Identified Uses and Uses Advised Against

- **Identified Uses:** Cosmetic/fragrance raw material; food flavor enhancer (food grade); aromatherapy oil; natural antibacterial/antioxidant ingredient; daily chemical fragrance additive; natural insect repellent.
- **Uses Advised Against:** Not for undiluted direct skin/mucous membrane application; non-food grade not for food contact/ingestion; not for use as a fuel or industrial solvent in large quantities; not for pharmaceutical/medical injection use.

### SECTION 2: Hazards Identification

#### 2.1 GHS Classification

- Eye irritation: Category 2 (Mild irritation, reversible for undiluted oil)
- Skin irritation: Category 2 (Mild irritation, reversible for undiluted oil)
- Specific target organ toxicity (single exposure) - Narcotic effects: Category 3 (Inhalation of high concentration vapor)

#### 2.2 GHS Label Elements

- **Hazard Pictogram:** (Warning)
- **Signal Word:** WARNING
- **Hazard Statements:**
  - H315: Causes skin irritation (undiluted)
  - H319: Causes serious eye irritation
  - H336: May cause drowsiness or dizziness (inhalation of high concentration vapor)
- **Precautionary Statements:**
  - P264: Wash skin thoroughly after handling
  - P280: Wear protective gloves/eye protection
  - P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
  - P332+P313: If skin irritation occurs: Get medical advice/attention
  - P370+P378: In case of fire: Use dry powder, CO<sub>2</sub> or foam for extinction
  - P403+P233: Store in a well-ventilated place. Keep container tightly closed

#### 2.3-2.6 Hazards Summary

- **Physical/Chemical Hazards:** Combustible liquid (flash point ≥85°C); no explosion risk; may oxidize on long-term contact with air (color darkens, no hazardous products); non-corrosive, no polymerization risk.

- **Health Hazards:** Undiluted oil causes mild skin/eye irritation in sensitive individuals; high concentration vapor inhalation may cause drowsiness/dizziness; no acute toxic effects at diluted use dosage; no carcinogenic/mutagenic/reproductive toxicity.
- **Environmental Hazards:** Slightly toxic to aquatic organisms; fully biodegradable in natural aerobic environment; no bioaccumulation potential in aquatic food chain.
- **Other Hazards:** No additional hazards identified; diluted oil ( $\leq 5\%$ ) has no irritation risk for normal use in cosmetics and daily chemicals.

### SECTION 3: Composition/Information on Ingredients

- **Substance/Mixture:** Natural mixture (steam-distilled essential oil)
- **Main Active Components (w/w):**

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Component	CAS No.	Concentration	Hazard Classification
Linalool	78-70-6	60.0-70.0%	Mild eye/skin irritation
Eugenol	97-53-0	5.0-8.0%	Non-hazardous at low concentration
Geraniol	106-24-1	3.0-5.0%	Non-hazardous
Other plant terpenes/esters-		7.0-12.0%	Non-hazardous

- **EC-No.:** N/A (natural essential oil mixture)
- **Hazardous Ingredients:** None (all components non-hazardous at formulated dosage)

### SECTION 4: First Aid Measures

#### 4.1 Description of First-Aid Measures

- **If Inhaled:** Move the victim to fresh air and keep the respiratory tract unobstructed. Rest in a position comfortable for breathing; get medical advice if dizziness, drowsiness or coughing persists for more than 30 minutes.
- **In Case of Skin Contact:** Remove contaminated clothing and shoes immediately; rinse the affected area with plenty of soap and running water for 5-10 minutes (do not use organic solvents). Apply natural vegetable oil to relieve mild irritation if needed.
- **In Case of Eye Contact:** Rinse eyes thoroughly with plenty of running water for 10-15 minutes, holding the eyelids open to ensure complete flushing. Remove contact lenses if present and easy to do. Consult a doctor immediately if redness, tearing or blurred vision persists.
- **If Swallowed:** Rinse mouth with clean water **do not induce vomiting**. Drink a small amount of milk or vegetable oil if conscious and alert; seek immediate medical attention and provide the product COA/MSDS to the physician.

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

- **Acute Effects:** Mild skin redness/itching (undiluted contact); eye redness/tearing/burning; dizziness/drowsiness (high concentration vapor inhalation); mild gastrointestinal discomfort (if undiluted oil is swallowed).
- **Delayed Effects:** No known delayed toxic effects based on current scientific data and industrial use experience.

#### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

- No specific medical treatment required; treat symptomatically according to the actual condition.
- Seek immediate medical attention if eye irritation persists for more than 24 hours or gastrointestinal discomfort is severe.

#### 4.4 Notes to Physician

- Inform the physician of the product name, CAS number and main components (linalool, eugenol); no specific antidote is available, symptomatic treatment is recommended.

## **SECTION 5: Firefighting Measures**

### **5.1 Extinguishing Media**

- **Suitable Extinguishing Media:** Dry powder, carbon dioxide (CO<sub>2</sub>), foam, water spray (for cooling containers only).
- **Unsuitable Extinguishing Media:** High-pressure water jet (may spread the burning liquid and increase the fire range).

### **5.2 Special Hazards Arising from the Substance or Mixture**

- Combustible liquid; burning produces non-hazardous carbon oxides (CO, CO<sub>2</sub>) and faint aromatic smoke; no toxic, explosive or corrosive combustion products.
- No explosive vapor-air mixture formation under normal storage and use conditions (low vapor pressure).

### **5.3 Advice for Firefighters**

- Wear standard fire-fighting gear (helmet, fire suit, self-contained breathing apparatus) for large fires to avoid inhalation of combustion fumes and smoke.
- Cool exposed containers with water spray continuously to prevent thermal expansion and leakage; continue cooling after the fire is extinguished.
- Fight the fire from the upwind direction and a safe distance; avoid contact with the burning liquid and combustion residues.

## **SECTION 6: Accidental Release Measures**

### **6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

- Wear nitrile rubber gloves, safety glasses and a protective lab coat for all spill handling; wear a face shield if splashing is possible.
- Ensure good natural or mechanical ventilation in the spill area; avoid breathing vapor, especially in confined spaces.
- Evacuate non-essential personnel from the spill area for large leaks (≥5 L) to prevent accidental inhalation or contact.

### **6.2 Environmental Precautions**

- Prevent the spilled oil from entering sewers, rivers, lakes, soil or other water bodies; use sand, vermiculite or diatomaceous earth to contain and absorb the spilled liquid immediately.
- Do not discharge contaminated absorbents or wastewater directly into the natural environment; collect and treat according to local environmental protection regulations.

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

- **Small Spill (<1 L):** Absorb the spilled oil with inert materials (sand, vermiculite); place the contaminated absorbents in sealed plastic drums for incineration or professional disposal. Wipe the spill area with ethanol and ventilate fully until no odor remains.
- **Large Spill (≥1 L):** Contain the spilled oil with dikes to prevent spread; transfer the liquid to sealed brown glass/stainless steel drums with a pump for recycling or professional disposal. Flush the contaminated area with water (collect the wastewater for biological treatment).

### **6.4 Reference to Other Sections**

- For waste disposal, see **Section 13**; for personal protective equipment, see **Section 8**.

## **SECTION 7: Handling and Storage**

### **7.1 Precautions for Safe Handling**

- Operate in a well-ventilated area; avoid breathing vapor and direct contact with undiluted oil (skin, eyes, mucous membranes).
- Use dedicated glass/stainless steel dispensing equipment; avoid mixing with strong acids, strong bases, oxidizing agents and excessive water.



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- Dilute the oil with vegetable oil/ethanol before use in cosmetic/food/daily chemical formulations; do not use undiluted oil directly.
- Wash hands thoroughly with soap and water after handling; do not eat, drink or smoke in the work area to avoid accidental ingestion.
- Avoid high temperature (>40°C) during handling to prevent volatilization and aroma degradation.

## 7.2 Conditions for Safe Storage, Including Any Incompatibilities

- **Storage Conditions:** Store in a cool, dark, well-ventilated warehouse at **5-25°C**; use brown glass or stainless steel containers and keep tightly sealed to prevent oxidation, volatilization and contamination. Avoid direct sunlight, high temperature (>30°C), open flame and long-term contact with air.
- **Incompatibilities:** Strong acids (pH <3), strong bases (pH >9), oxidizing agents (e.g., hydrogen peroxide, chlorine), heavy metal salts, excessive water-based materials.
- **Storage Class (TRGS 510):** 3 (Combustible Liquids, low hazard)
- **Shelf Life:** 24 months (unopened, under specified storage conditions); 6 months after opening (sealed and refrigerated at 5-10°C).
- **Storage Note:** If the oil darkens slightly during storage (due to mild oxidation), it does not affect the basic performance for general use.

## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

- **Linalool (main component):** Recommended TWA (Time-Weighted Average) 10 mg/m<sup>3</sup> (air); no official national/international occupational exposure limits (OEL) for basil oil mixture.
- **Biological Exposure Indices:** No relevant data available for basil oil.

### 8.2 Exposure Controls

- **Engineering Controls:** Local exhaust ventilation (for large-scale dispensing and heating operations); general ventilation for routine handling to maintain low vapor concentration in the air.
- **Personal Protective Equipment (PPE):**
  - Eye/Face Protection: Safety glasses (routine handling); face shield (large-scale spill/dispensing/heating).
  - Skin Protection: Nitrile rubber gloves (thickness ≥0.1 mm), protective lab coat and anti-slip shoes; avoid latex gloves (poor compatibility with essential oils).
  - Respiratory Protection: Half-face respirator with organic vapor cartridge (for high concentration vapor or poor ventilation); no respirator required for normal diluted use.
- **Hygiene Measures:** Install a dedicated hand washing station with soap and running water near the work area; provide emergency eye wash and shower facilities for large-scale operation areas (≥50 kg handling).
- **Control of Environmental Exposure:** No special environmental exposure controls required; prevent accidental discharge to the natural environment.

## SECTION 9: Physical and Chemical Properties

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Property	Value (25°C)	Unit
Physical State	Liquid	-
Color	Colorless to pale yellow	-
Odor	Characteristic sweet basil aromatic scent	-
Melting Point	≤ -15	°C
Boiling Point	220-240 (mixture)	°C

Property	Value (25°C)	Unit
Flash Point (Closed Cup)	≥ 85	°C
Autoignition Temperature	> 320	°C
Relative Density (20/20°C)	0.915-0.935	g/cm <sup>3</sup>
Refractive Index (20°C)	1.4650-1.4750	-
Viscosity	8-12	mPa·s
Water Solubility	Slightly soluble (<0.1 g/100 mL)	-
Solubility	Miscible with ethanol, ether, vegetable oil, essential oils; 1:3 soluble in 70% ethanol	-
Vapor Pressure	< 0.01	hPa
Flammability	Combustible liquid	-
Explosive Properties	Not explosive	-
Oxidizing Properties	None	-
Decomposition Temperature	> 200	°C
pH Value (25°C)	6.0-7.5	-

## SECTION 10: Stability and Reactivity

### 10.1 Chemical Stability

- The product is chemically stable under recommended storage and use conditions (5-25°C, sealed, away from light); slight oxidation may occur on long-term contact with air (color darkens), with no hazardous products generated.
- No decomposition or chemical change under normal use conditions (diluted, room temperature).

### 10.2 Possibility of Hazardous Reactions

- No hazardous reactions under normal storage and use conditions; no polymerization risk under any industrial use conditions.

### 10.3 Conditions to Avoid

- High temperature (>200°C), direct strong sunlight, open flame, long-term contact with air, contact with incompatible materials (strong acids/alkalis/oxidizing agents).

### 10.4 Incompatible Materials

- Strong mineral acids (sulfuric acid, hydrochloric acid), strong alkalis (sodium hydroxide, potassium hydroxide), oxidizing agents (hydrogen peroxide, chlorine dioxide), heavy metal salts (lead acetate, copper sulfate), chlorine-containing compounds.

### 10.5 Hazardous Decomposition Products

- Thermal decomposition at >200°C produces non-hazardous carbon oxides (CO, CO<sub>2</sub>) and natural terpene vapors (linalool, geraniol); no toxic, corrosive or explosive decomposition products.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects (based on basil oil and main component linalool)

- Acute Toxicity:**
  - Oral (Rat, LD<sub>50</sub>): 3500 mg/kg
  - Dermal (Rabbit, LD<sub>50</sub>): > 5000 mg/kg
  - Inhalation (Rat, LC<sub>50</sub>): > 1000 mg/m<sup>3</sup> (4-hour exposure)

- **Skin Corrosion/Irritation:** Mild irritation (Rabbit, 4-hour undiluted exposure) – reversible redness, no corrosion or blistering; no irritation for diluted oil ( $\leq 5\%$ ).
- **Serious Eye Damage/Eye Irritation:** Mild to moderate irritation (Rabbit, 24-hour exposure) – redness/tearing, reversible within 72 hours; no permanent eye damage.
- **Respiratory or Skin Sensitization:** No skin/respiratory sensitization (Guinea pig test) for diluted oil; rare sensitization for long-term undiluted contact in highly sensitive individuals.
- **Germ Cell Mutagenicity:** No mutagenic effect (Ames test); no genetic toxicity.
- **Carcinogenicity:** Not classified as carcinogenic by IARC, EPA or NTP; no carcinogenic effect in long-term industrial use.
- **Reproductive Toxicity:** No reproductive/developmental toxicity (Rat test) at normal diluted dosage; no adverse effect on fertility.
- **Specific Target Organ Toxicity (Single/Repeated Exposure):** Single exposure to high concentration vapor may cause mild narcotic effects (drowsiness/dizziness); no target organ toxicity for repeated diluted use.
- **Aspiration Hazard:** Low (low vapor pressure, high flash point, low viscosity; no aspiration risk for normal industrial and daily use).

## 11.2 Additional Information

- The toxicological properties of basil oil have been sufficiently studied; the product is safe for cosmetic, food, daily chemical and aromatherapy use when diluted according to the recommended dosage and safety precautions.

## SECTION 12: Ecological Information

### 12.1 Toxicity

- Fish (Zebrafish,  $LC_{50}$ ): 700 mg/L (96-hour exposure)
- Daphnia ( $EC_{50}$ ): 500 mg/L (48-hour exposure)
- Algae ( $EC_{50}$ ): 800 mg/L (72-hour exposure)
- **Conclusion:** Slightly toxic to aquatic organisms; no acute aquatic toxicity at normal discharge levels (diluted  $\leq 1\%$ ).

### 12.2 Persistence and Degradability

- Fully biodegradable ( $BOD_5 / COD = 0.75$ ) in 28 days under aerobic aquatic conditions; no persistent residues in the natural environment, can be completely degraded by microorganisms.

### 12.3 Bioaccumulative Potential

- Low bioaccumulation potential ( $\log Kow = 3.2$  for linalool); no bioaccumulation in the aquatic food chain, no biomagnification effect.

### 12.4 Mobility in Soil

- Low mobility in soil; the product binds to soil organic matter, no leaching risk to groundwater or underground water sources.

### 12.5 Results of PBT and vPvB Assessment

- Not classified as PBT (Persistent, Bioaccumulative, Toxic) or vPvB (very Persistent, very Bioaccumulative) according to GHS and EU REACH regulations.

### 12.6 Endocrine Disrupting Properties

- No data available; no known endocrine disrupting effect based on current industrial use experience.

### 12.7 Other Adverse Effects

- No long-term adverse effects on terrestrial and aquatic ecosystems at normal use and discharge levels; the product is a natural plant extract and has no environmental pollution risk after biodegradation.

## SECTION 13: Disposal Considerations

## 13.1 Waste Treatment Methods

- **Product Waste:** Unused/expired basil oil – incinerate in a licensed waste incineration plant (complete combustion to avoid smoke); or recycle for industrial fragrance use if the quality is qualified.
- **Contaminated Waste:** Spill absorbents (sand, vermiculite) – incinerate as non-hazardous waste or dispose of through professional waste treatment facilities in accordance with local regulations.
- **Wastewater:** Contaminated wastewater (from cleaning) – treat by biological wastewater treatment system (biodegradation) before discharge; comply with local effluent quality standards.
- **Packaging Waste:** Rinse the packaging with ethanol/vegetable oil (recycle the rinse liquid for industrial use); brown glass/stainless steel packaging – recycle and reuse; contaminated plastic packaging – dispose of as non-hazardous waste in a licensed facility.

## 13.2 Disposal Notes

- Comply with local, national and international waste disposal regulations; do not dump waste oil, contaminated absorbents or wastewater directly into the environment, soil or water bodies.
- Food grade basil oil waste shall be disposed separately from industrial grade waste if required by local food safety regulations.

## 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

- Classified as **non-hazardous goods** for transport; transport by ordinary closed vehicles (for combustible liquids).
- Transport at 5-30°C; avoid direct sunlight, high temperature (>35°C), low temperature (<0°C), open flame and collision during transit.
- Use sealed brown glass/stainless steel drums for packaging; ensure no leakage and mark the package with **Combustible Liquid** and **Keep Away from Heat/Light**.
- Load and unload the package gently to prevent breakage and leakage.

### 14.7 Incompatible Materials

- Do not transport with strong acids, strong bases, oxidizing agents, food (non-food grade), pharmaceutical raw materials and chlorine-containing compounds.

**Further Information:** Not classified as dangerous goods under international and national transport regulations.

## SECTION 15: Regulatory Information

### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

- **National Regulations (China):**
  - Hazardous Chemical Safety Management Regulation (Non-hazardous classification)



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- Cosmetic Safety Technical Specifications (2021) (cosmetic grade)
- Food Additive Use Standard (GB 2760) (food grade)
- Environmental Protection Law of the People's Republic of China
- **International Regulations:**
- GHS Classification (Rev. 9): Classification as per Section 2.1 (Eye/Skin Irritation, Narcotic Effects Cat 3)
- EU REACH: Registered in ECHA; not listed in SVHC Candidate List; complies with CLP regulation
- US TSCA: Listed on the TSCA Inventory; FDA compliant (cosmetic/food grade)
- IFRA (International Fragrance Association): Complies with fragrance ingredient use standards
- FCC (Food Chemicals Codex): Compliant (food grade)
- ISO 4720: Complies with natural essential oil quality standards

## 15.2 Other Regulations

- Comply with local essential oil, cosmetic, food and daily chemical raw material regulations; industrial use shall meet occupational health and safety standards.
- Food grade basil oil shall comply with national and international food additive and food contact material safety standards.
- Indoor use (aromatherapy) shall meet indoor air quality standards (e.g., EPA, EU Indoor Air Quality Directive).

## SECTION 16: Other Information

### 16.1 Further Information

This MSDS is based on current scientific knowledge and industrial use experience, and complies with GB/T 16483, GB/T 17519 and GHS (Rev.9) standards. It is intended for the safe handling, storage, transport and disposal of basil oil. The data in this MSDS is for reference only and does not constitute a product quality guarantee.

### 16.2 Liability Note

The supplier (NEWAY SINOPHC TECH. LIMITED) is not liable for any damage or loss caused by improper use (e.g., undiluted direct contact), non-compliance with safety precautions or use beyond the product's intended scope.

### 16.3 Update Note

This MSDS will be updated in a timely manner if new scientific safety data or regulatory requirements become available. The latest version will be provided by the supplier upon request.

### 16.4 Dilution Note

Basil oil must be diluted with vegetable oil/ethanol before use in cosmetics, food, daily chemicals and aromatherapy; undiluted direct use may cause mild irritation to skin and eyes.

### 16.5 Contact Information

For further information about the product, please contact the supplier at +86-021-50350029 (Tel/Fax) or the official email address (provided by the supplier upon request).

**Revision Date:** 24 February 2026 **Version:** V1.0