

## Safety Data Sheet (MSDS)

### - Oak Moss Extracts

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

**Name:** Oak Moss Extracts **Revision Date:** 27 FEB 2026

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

#### 1.1 Product Identifiers

- Product Name: Oak Moss Extracts
- Synonyms: Evernia prunastri Extract; Oak Moss Lichen Extract; Natural Oak Moss Extract
- Product Number: OME-20260227
- Brand: SIGALD
- CAS-No.: 90028-68-5
- MDL Number: MFCD00148210
- Main Components: Evernic acid (CAS: 480-96-6), Usnic acid (CAS: 125-46-2)
- Molecular Weight: Variable (natural mixture)

#### 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 Uses

- **Identified Uses:** Fragrance industry (perfume, cologne, soap); cosmetic formulation (scented lotion, shampoo); flavoring auxiliary; natural dye raw material.
- **Uses Advised Against:** Undiluted direct skin contact (sensitization risk); use in infant products (0-3 years) without dilution; oral consumption; use in medical/pharmaceutical products.

### SECTION 2: Hazards Identification

#### 2.1 GHS Classification

- Skin Sensitization, Category 1 (H317)
- Eye Irritation, Category 2 (H319)
- Skin Irritation, Category 2 (H315)
- Aquatic Acute Toxicity, Category 3 (H402)
- Aquatic Chronic Toxicity, Category 3 (H412)

#### 2.2 GHS Label Elements

- **Pictograms:** (Exclamation Mark)
- **Signal Word:** Warning
- **Hazard Statements:**
  - H315: Causes skin irritation
  - H317: May cause an allergic skin reaction
  - H319: Causes serious eye irritation
  - H402: Harmful to aquatic life
  - H412: Harmful to aquatic life with long-term effects
- **Precautionary Statements:** P210, P261, P272, P273, P280, P302+P352, P305+P351+P338, P333+P313, P362, P501

#### 2.3 Physical and Chemical Hazards

No flammable/explosive hazards; no corrosive properties; slight viscosity change at low/high temperature, no hazardous reaction.



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## 2.4 Health Hazards

- **Acute:** Causes mild skin irritation and serious eye irritation; direct contact may cause immediate discomfort in sensitive individuals.
- **Chronic:** May cause allergic skin reaction with repeated contact; no known chronic target organ damage with normal diluted use.

## 2.5 Environmental Hazards

Harmful to aquatic life with acute and long-term effects; low bioaccumulation potential in aquatic food chains.

## 2.6 Other Hazards

No additional hazards identified.

## SECTION 3: Composition/Information on Ingredients

- **Mixture:** Solvent-extracted natural extract from *Evernia prunastri* (oak moss lichen), containing lichen acids, terpenoids and aromatic compounds.
- **Key Components:** Total Lichen Acid (8.0-10.0%), Evernic acid (3.0-5.0%), Usnic acid (1.0-2.0%).

Ingredient	CAS No.	Concentration (w/w)	GHS Classification
Evernic acid	480-96-6	3.0-5.0%	H315, H317, H319, H402, H412
Usnic acid	125-46-2	1.0-2.0%	H315, H319, H402, H412
Oak Moss Extracts (Mixture)	90028-68-5	100%	H315, H317, H319, H402, H412

## SECTION 4: First Aid Measures

- **Inhalation:** Remove to fresh air. Rest and keep warm. If coughing or chest discomfort persists, call a physician.
- **Skin Contact:** Wash immediately with plenty of soap and water for 10-15 minutes. Remove contaminated clothing and wash before reuse. If rash, redness or itching occurs, seek medical advice immediately.
- **Eye Contact:** Rinse cautiously with plenty of running water for 15-20 minutes, holding eyelids open. Remove contact lenses if present. Call a physician immediately (may cause persistent stinging).
- **Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Call a poison center or physician immediately if large quantities are ingested (may cause gastrointestinal irritation).

## SECTION 5: Firefighting Measures

- **Suitable Media:** Water spray, dry chemical powder, carbon dioxide (CO<sub>2</sub>), foam.
- **Unsuitable Media:** No limitations of extinguishing agents.
- **Special Hazards:** No flammable properties; combustion at high temperature may produce minor aromatic fumes, no toxic combustion products.
- **Advice:** Wear standard fire-fighting gear; cool containers with water spray if exposed to high temperature.

## SECTION 6: Accidental Release Measures

- **Personal Precautions:** Wear nitrile rubber gloves, chemical safety goggles and face shield. Ensure good ventilation in the spill area.
- **Environmental Precautions:** Prevent entry into sewers, water courses, or soil; cover spill with inert absorbent to avoid runoff to aquatic environment.
- **Clean-up:** Small spills: Absorb with sand or diatomaceous earth, scoop into sealed container for proper disposal. Large spills: Dike with inert material, transfer to sealable drums for recycling or professional disposal.
- **Reference to Other Sections:** For waste disposal, see Section 13.

## SECTION 7: Handling and Storage



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- **Handling:** Use in a well-ventilated area. Avoid skin and eye contact; do not eat, drink or smoke while handling. Perform skin patch test before cosmetic formulation application. Wash hands thoroughly with soap and water after handling.
- **Storage:** Store in a cool, dark, well-ventilated warehouse at 5-25°C. Keep container tightly closed to prevent oxidation and evaporation of active components.
- **Incompatibilities:** Strong oxidizing agents, strong alkalis (pH > 9.0), heavy metal salts, organic amines.
- **Storage Class (TRGS 510):** 13 (Non-Hazardous Liquids with Sensitization Risk)
- **Shelf Life:** 24 months (unopened, nitrogen-filled packaging recommended).

### SECTION 8: Exposure Controls/Personal Protection

#### 8.1 Control Parameters

- **Occupational Exposure Limit (OEL):** No unified OEL for oak moss extracts; follow Evernic acid OEL (TWA: 0.5 mg/m<sup>3</sup>, US ACGIH).

#### 8.2 Exposure Controls

- **Engineering Controls:** Install local exhaust ventilation at operation points (e.g., blending, packaging) to reduce vapor concentration.
- **Personal Protective Equipment (PPE):**
  - Eye/Face Protection: Chemical safety goggles with side shields and face shield (prevent splashing).
  - Skin Protection: Nitrile rubber gloves (≥0.11 mm thickness), chemical-resistant protective clothing.
  - Respiratory Protection: Organic vapor cartridge respirator if ventilation is inadequate or during bulk handling.
- **Hygiene Measures:** Provide emergency eye wash and safety shower in the workplace; launder contaminated clothing separately from regular laundry.

### SECTION 9: Physical and Chemical Properties

- **State:** Viscous liquid to paste
- **Color:** Olive green to brown
- **Odor:** Characteristic earthy, mossy, woody aromatic scent
- **Flash Point:** > 100°C (Closed Cup)
- **Relative Density:** 1.020 - 1.060 (20/20°C)
- **Refractive Index:** 1.5100 - 1.5300 (20°C)
- **Acid Value:** 20.0 - 40.0 mg KOH/g
- **Solubility:** Soluble in 95% ethanol, propylene glycol, fixed oils and organic solvents; Insoluble in water and low-concentration ethanol.
- **Viscosity:** 150-300 mPa·s (25°C)
- **Melting Point/Freezing Point:** ≤ 0°C (partial solidification, no hazardous change)
- **Decomposition Temperature:** ≥ 80°C (active component inactivation, no toxic decomposition)
- **pH Value (1% in ethanol):** 3.0-5.0

### SECTION 10: Stability and Reactivity

#### 10.1 Chemical Stability

Stable under recommended storage conditions (5-25°C, sealed, dark); slow oxidation on exposure to air/light causes slight color darkening, no loss of fragrance activity.

#### 10.2 Possibility of Hazardous Reactions

No hazardous polymerization, decomposition or violent reaction under normal use and storage conditions.

#### 10.3 Conditions to Avoid



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High temperature (>30°C), direct sunlight, long-term air exposure, contact with strong oxidants/alkalis.

## 10.4 Incompatible Materials

Concentrated hydrogen peroxide, potassium permanganate, sodium hydroxide solution (≥10%), heavy metal chlorides, triethylamine.

## 10.5 Hazardous Decomposition Products

No hazardous decomposition products; active components inactivate at high temperature without toxic or corrosive substances.

## SECTION 11: Toxicological Information

### • Acute Toxicity:

- Oral (Rat, LD<sub>50</sub>): > 5000 mg/kg
- Dermal (Rabbit, LD<sub>50</sub>): > 2000 mg/kg
- Inhalation (Rat, LC<sub>50</sub>): > 10 mg/m<sup>3</sup> (4-hour exposure)
- **Skin Corrosion/Irritation:** Category 2, causes mild skin irritation (reversible redness and itching).
- **Serious Eye Damage/Eye Irritation:** Category 2, causes serious eye irritation (redness, tearing and stinging).
- **Skin Sensitization:** Category 1, may cause allergic skin reaction (Guinea pig test positive, human sensitization reported).
- **Carcinogenicity:** IARC Group 3 (Not classifiable as to its carcinogenicity to humans).
- **Reproductive Toxicity:** No reproductive toxicity with normal diluted use (no adverse effects on fertility and fetal development in animal tests).
- **Specific Target Organ Toxicity:** No target organ toxicity with normal diluted exposure.
- **Aspiration Hazard:** Low (high viscosity, no aspiration risk under normal handling).

## SECTION 12: Ecological Information

### • Toxicity:

- Fish (Zebrafish, LC<sub>50</sub>): 38 mg/L (96-hour exposure)
- Daphnia (EC<sub>50</sub>): 25 mg/L (48-hour exposure)
- Algae (EC<sub>50</sub>): 45 mg/L (72-hour exposure)
- **Persistence and Degradability:** Readily biodegradable (BOD<sub>5</sub>/COD = 0.65) in aquatic environments; degradation rate >70% in 28 days by microorganisms.
- **Bioaccumulative Potential:** Low potential (BCF < 100, fish test); no biomagnification in aquatic food chains.
- **Mobility in Soil:** Low mobility; binds strongly to soil organic matter (Koc = 550); no soil accumulation risk.
- **PBT/vPvB Assessment:** Not classified as PBT/vPvB (meets biodegradability and low bioaccumulation criteria).
- **Other Adverse Effects:** Harmful to aquatic invertebrates at moderate concentrations; no eutrophication risk (no nitrogen/phosphorus components).

## SECTION 13: Disposal Considerations

- **Product Waste:** Dispose of to licensed waste treatment facilities in accordance with local, national and international regulations. Incineration with flue gas treatment is recommended; do not discharge into drains, water bodies or soil.
- **Packaging Waste:** Rinse packaging thoroughly with 95% ethanol to remove residuals, then dispose of as non-hazardous waste or recycle (for glass/HDPE packaging).
- **Spilled Waste:** Collect all spilled material in sealed containers and dispose of as product waste; do not mix with domestic waste or agricultural fertilizer.

## SECTION 14: Transport Information

- **UN Number:** ADR/RID: -; IMDG: -; IATA-DGR: -



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- **UN Proper Shipping Name:** ADR/RID: Not dangerous goods; IMDG: Not dangerous goods; IATA-DGR: Not dangerous goods
- **Transport Hazard Class(es):** ADR/RID: -; IMDG: -; IATA-DGR: -
- **Packaging Group:** ADR/RID: -; IMDG: -; IATA-DGR: -
- **Environmental Hazards:** ADR/RID: No; IMDG Marine Pollutant: No; IATA-DGR: No
- **Special Precautions for User:** Transport at 5-30°C; avoid direct sunlight, high temperature, collision and extrusion; store separately from strong oxidants/alkalis during transport; mark package with "SKIN SENSITIZER" and "EYE IRRITANT" warning labels.

### SECTION 15: Regulatory Information

- **EU:** REACH Registered; Compliant with EC 1223/2009 (Cosmetics Regulation, with use restrictions for skin sensitization); IFRA standards compliant (maximum usage limit in fragrance: 0.1-0.5%).
- **US:** TSCA Listed; FDA compliant for fragrance use (21 CFR); OSHA compliant for occupational exposure control.
- **China:** Compliant with Cosmetic Safety Technical Specification (2015, with sensitization use restrictions); no food additive approval (not for oral use).
- **International:** GHS Rev.9 Classification compliant; IMDG Code non-dangerous goods; IFRA Fragrance Raw Material Standard compliant.

### SECTION 16: Other Information

- **Further Information:** This MSDS is based on current scientific and regulatory data, complying with GB/T 16483, GB/T 17519, GHS, IMDG and IATA standards. The supplier is not liable for damage caused by improper use, non-compliance with safety precautions or unauthorized mixing with other materials.
- **Revision Note:** First revision of MSDS for Oak Moss Extracts (CAS 90028-68-5) of brand SIGALD.
- **Contact for Further Information:** NEWAY SINOPHC TECH. LIMITED, Tel: +86-021-50350029 (24h technical support for application and formulation).

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