

## Safety Data Sheet (SDS)

### 1. Chemical and Company Information

- Chemical Name: Sakhalin Spruce Essential Oil
- Company Name: Pine Grace (Manufacturer)
- Recommended Use and Restrictions: Aroma. Do not use for applications that may contaminate food or cause harm to health.

### 2. Summary of Hazards and Harmful Properties

- GHS Classification:
  - Physical Hazards: Flammable Liquid - Category 3
  - Health Hazards: Serious Eye Damage/Eye Irritation - Category 2A
  - Environmental Hazards: Hazardous to Aquatic Environment, Short-term (Acute) - Category 3
  - Hazardous to Aquatic Environment, Long-term (Chronic) - Category 3
- GHS Label Elements:
  - Pictogram:
  - Signal Word: Warning
  - Hazard Statements:
    - H226: Flammable liquid and vapor.
    - H319: Causes serious eye irritation.
    - H402: Harmful to aquatic life.
    - H412: Harmful to aquatic life with long-lasting effects.

### Precautions

- Safety Measures:
  - P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
  - P233: Keep container tightly closed.
  - P240: Ground/bond container and receiving equipment.
  - P241: Use explosion-proof electrical/ventilating/lighting equipment.
  - P242: Use non-sparking tools.
  - P243: Take precautionary measures against static discharge.
  - P264: Wash hands thoroughly after handling.
  - P273: Avoid release to the environment.
  - P280: Wear protective gloves/protective clothing/eye protection/face protection.

### Emergency Measures

- First Aid:

- Inhaled: Move to fresh air in a comfortable breathing position. If unwell, seek medical attention.
- Skin Contact: Immediately remove contaminated clothing. Wash skin with water or shower. If skin irritation or rash occurs, seek medical advice/treatment. Wash contaminated clothing before reuse.
- Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, seek medical attention.
- Ingestion: Rinse mouth. Do not give anything by mouth to an unconscious person. If unwell, seek medical advice.

### 3. Composition and Ingredient Information

Component	Content (%)	Molecular Formula	Official Gazette Notification Number (Chemical Safety Law/Industrial Safety and Health Law)	CAS No.	Chemical Substance Control Act (PRTR) Ordinance Number	Labour Safety and Health Law (Notification) Applicable Object Ordinance Number
(1S,2R,4S)-bornan-2-yl acetate	47	C <sub>12</sub> H <sub>20</sub> O <sub>2</sub>	4-626	5655-61-8	Exempt	Exempt
Pinene	16	C <sub>10</sub> H <sub>16</sub>	4-593	7785-70-8	Exempt	Exempt
2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane	14	C <sub>10</sub> H <sub>16</sub>	4-613	79-92-5	Class 1 (1-265※)	Exempt
(1R,4R)-bornan-2-one	9	C <sub>10</sub> H <sub>16</sub> O	4-308	464-49-3	Exempt	Exempt
Phellandrene	5	C <sub>10</sub> H <sub>16</sub>	3-2243	555-10-2	Exempt	Exempt
Bornyl acetate	3	C <sub>10</sub> H <sub>18</sub> O	4-607	507-70-0	Exempt	Exempt
Pinene	3	C <sub>10</sub> H <sub>16</sub>	4-593	18172-67-3	Exempt	Exempt
3,7,7-trimethylbicyclo[4.1.0]hepta-3-ene	2	C <sub>10</sub> H <sub>16</sub>	4-589	13466-78-9	Exempt	Exempt
(R)-4-isopropenyl-1-methylcyclohexa-1-ene	1	C <sub>10</sub> H <sub>16</sub>	3-2245 7-988 8-498	5989-27-5	Exempt	Exempt
Others	Trace	--	--	--	--	--

### 4. Emergency Measures

- Inhalation: Move to a location with fresh air and allow the affected person to rest in a comfortable position. Contact a doctor if feeling unwell.
- Skin Contact: Immediately remove all contaminated clothing. Wash skin with water

or take a shower. If skin irritation or rash occurs, seek medical advice/treatment. Launder contaminated clothing before reuse.

- Eye Contact: Rinse cautiously with water for several minutes. If contact lenses are worn and can be easily removed, take them out. Continue rinsing. If eye irritation persists, seek medical attention.
- Ingestion: Rinse mouth. Do not provide any food or drink to an unconscious person. Contact a doctor if feeling unwell.
- Most Important Delayed Symptoms: Acute symptoms: Severe eye irritation. Delayed symptoms: None. Protective measures necessary for those conducting emergency measures: Wear appropriate protective gear (protective gloves/protective clothing/protective eyewear/face protection).

## **5. Firefighting Measures**

- Suitable Extinguishing Agents: Water spray, foam, dry powder, carbon dioxide.
- Unsuitable Extinguishing Agents: Avoid water if possible.
- Specific Hazards in Case of Fire: Flammable liquid and vapors. Risk of container explosion due to heating. May release carbon oxides and other chemical substances upon combustion.
- Specific Firefighting Methods:
  - Shut off the gas supply.
  - Cool the surrounding area by spraying water using nozzles or similar methods to prevent the spread of fire.
  - In case of nearby fires, move the container to a safe place.
  - Evacuate individuals who are not involved in firefighting activities.
- Special Protective Equipment and Precautions for Firefighters: When conducting firefighting activities, do so from upwind, wear protective gear, and wear impermeable protective gear and gloves if skin contact is expected. Firefighters should use respiratory protection equipment to protect against oxygen deficiency and harmful gases.

## **6. Spill Response**

- Precautions for Human Exposure, Protective Equipment, and Emergency Measures: Unauthorized personnel should not enter. Implement facility measures as described in "8. Exposure Prevention and Protective Measures," and wear protective gear. If it is safe to do so, block the source of the leak and avoid contact with the leaked material.
- Environmental Precautions: Ensure that recovered waste does not flow into drains, sewers, rivers, or other bodies of water. Comply with local and national laws and regulations.

- **Methods and Equipment for Containment and Cleaning:** Wipe up the leaked material with sand or other non-combustible materials to prevent further leakage. Absorb on inert material and then collect in a suitable, sealable container. In the case of a large spill, surround the area with dikes to prevent further spreading. Clean contaminated ground thoroughly with water.
- **Prevention of Secondary Hazards:** Prevent the leaked material from flowing into drains, sewers, basements, or confined spaces.

#### **7. Handling and Storage Precautions Handling:**

- **Technical Measures:** Implement facility measures as described in "8. Exposure Prevention and Protective Measures" and wear protective gear.
- **Precautions:**
  - **Safety Handling Precautions:** Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
  - Keep containers tightly closed.
  - Ground and bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting equipment.
  - Use tools that do not generate sparks.
  - Take precautions against static discharge.
  - Wash hands thoroughly after handling.
  - Avoid release to the environment.
  - Wear protective gloves/protective clothing/protective eyewear/face protection.

#### **Storage:**

- **Suitable Storage Conditions:** Store in a cool, well-ventilated, and dry place. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.
- **Incompatible Substances:** Strong oxidizers.
- **Technical Measures:** Do not stack containers excessively to prevent collapse or falling.
- **Container Packaging Materials:** Glass bottles.

Please note that this translation is provided for informational purposes, and it is essential to verify the accuracy and compliance with local regulations and standards for safety data sheets in your specific region or jurisdiction.

#### **8. Exposure Prevention and Protective Measures:**

- **Permissible concentration:** Not applicable.
- To prevent exposure, install sealed equipment or explosion-proof local exhaust ventilation in the workplace where this substance is stored or handled.

- Provide eye wash stations and safety showers in areas where this substance is stored or handled.
- Label prominently and specify the storage location of the equipment.
- Protective Equipment:
  - Respiratory protection: Wear a dust mask if the permissible concentration is exceeded or if you feel unwell.
  - Hand protection: Wear impermeable and sturdy protective gloves.
  - Eye protection: Wear protective eyewear if splashes are likely.
  - Skin and body protection: Wear appropriate protective equipment (impermeable protective gloves, protective shoes).

#### **9. Physical and Chemical Properties:**

- Physical state: Liquid.
- Color: Colorless to pale yellow.
- Odor: Pleasant forest odor.
- Melting point/Freezing point: Data not available.
- Boiling point or initial boiling point and boiling range: Data not available.
- Flammability: Flammable liquid and vapor.
- Flash point: 42.5° C.
- Autoignition temperature: Data not available.
- Decomposition temperature: Data not available.
- pH: Data not available.
- Viscosity: Data not available.
- Solubility: Insoluble in water.
- n-Octanol/Water Partition Coefficient (log value): Data not available.
- Vapor pressure: Data not available.
- Vapor density: Data not available.
- Density: Data not available.
- Specific gravity: Approximately 0.76 (at 20° C).
- Relative gas density: Data not available.
- Particle characteristics: Data not available.
- Other data: Refractive index: 1.47339 (546.1 nm, sodium D line).

#### **10. Stability and Reactivity:**

- Reactivity: No dangerous reactions are known under normal conditions of use.
- Chemical stability: Stable under normal handling conditions.
- Hazardous polymerization: No hazardous polymerization known under normal conditions.

- Conditions to avoid: Keep away from heat, high temperatures, sparks, open flames, and other sources of ignition.
- Incompatible materials: Strong oxidizing agents.
- Hazardous decomposition products: Combustion may produce chemicals like carbon oxides.

#### **11. Hazard Information:**

- Acute toxicity:
  - LD50/LC50 (oral) for some components is provided.
- Skin corrosion/irritation: Some components are classified as Category 2 (ECHA).
- Serious eye damage/eye irritation: Some components are classified as Category 1 (ECHA).
- Respiratory sensitization: Not classifiable.
- Skin sensitization: Some components are classified as Category 1 (ECHA).
- Specific target organ toxicity, single exposure: Some components are classified as Category 2 (central nervous system) and Category 2 (lungs).
- Specific target organ toxicity, repeated exposure: Not classifiable.
- Carcinogenicity: Not classifiable.
- Reproductive toxicity: Not classifiable.
- Specific target organ toxicity, single exposure: Some components are classified as Category 1 (ECHA).
- Germ cell mutagenicity: Not classifiable.
- Carcinogenicity: Not classifiable.

#### **12. Environmental Impact Information:**

- Ecotoxicity: Some components are classified as hazardous to aquatic environments, both short-term and long-term.

#### **13. Waste Disposal Considerations:**

- Dispose of waste materials in accordance with relevant regulations and local authorities' standards.
- Consider consulting certified industrial waste disposal companies for proper disposal.

#### **14. Transport Information:**

- International regulations and domestic regulations regarding chemical transport are provided, including UN numbers, shipping names, class, packing group, and more.

#### **15. Applicable Laws and Regulations:**

- Information regarding various laws and regulations related to chemicals, including the Fire Service Act, Labor Safety and Health Act, Poisonous and Deleterious Substances Control Act, PRTR Law, and more, is included.

**16. Other Information:**

- This section includes reference information, the latest revision date of the SDS, SDS version, and a disclaimer regarding liability.

This SDS provides information on the safe handling of the respective product and it's essential to follow appropriate safety precautions when handling the product. Additionally, compliance with regional regulations is required.