



MATERIAL SAFETY DATA SHEET

1. Identification of Substance/Preparation & Company

PRODUCT NAME: Pine Oil
PRODUCT CODE: PINE
SUPPLIER: Green Valley Aromatherapy Ltd.,
505 Duncan Ave, Courtenay, BC CANADA V9N 2M6
Emergency Tel No: (250) 334-4836. Contact Person: Kelly Lees

2. Composition / Information on Ingredients

DEFINITION/BOTANICAL ORIGIN:	By steam distillation of needles of Scotch pine <i>Pinus sylvestris</i> L.	
H-No: 3301.29.5050	CAS No: 8023-99-2	Status: natural
CoE No: 341	FEMA: 2906	Additives: none
FDA: 172.51	IFRA: not restricted	Application:
RIFM: monograph	EINECS:	RTECS:
INCI name: <i>Pinus sylvestris</i>		FCCIV:

3. Hazards Identification

R10 Flammable liquid

4. First-Aid Measures

INHALATION: Remove from exposure site to fresh air. Keep at rest. Obtain medical attention.

EYE CONTACT: Rinse immediately with plenty of water for at least 15 minutes. Contact a doctor if symptoms persist.

SKIN CONTACT: Remove contaminated clothes. Wash thoroughly with soap & water, flush with plenty of water. If irritation persists, seek medical advice.

INGESTION: Rinse out mouth with water. Seek medical advice **immediately**.

OTHER: When assessing action take Risk & Safety Phrases into account (Section 15).

5. Fire Fighting Measures

EXTINGUISHING MEDIA: Use CO₂, Dry Powder or Foam type Extinguishers, spraying extinguishing media to base of flames. Do not use direct water jet on burning material.

SPECIAL MEASURES: Avoid vapour inhalation. Keep away from sources of ignition. Do not smoke. Wear positive pressure self-contained breathing apparatus & protective clothing.

EXTINGUISHING PROCEDURES: Closed containers may build up pressure when exposed to heat and should be cooled with water spray.

6. Accidental Release Measures

PERSONAL PRECAUTIONS: Avoid inhalation & direct contact with skin & eyes. Use individual protective equipment (safety glasses, waterproof-boots, suitable protective clothing) in case of major spillages.

ENVIRONMENT PRECAUTIONS: Keep away from drains, soils, surface & ground waters.

CLEAN UP METHODS Remove all potential ignition sources. Contain spilled material. Cover with an inert or

FOR SPILLAGES: non-combustible inorganic absorbent material, sweep up and remove to an approved disposal container. Observe municipal, federal and local disposal regulations.

7. Handling & Storage

PRECAUTIONS IN HANDLING: Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene. Do not eat, drink or smoke whilst handling.

STORAGE CONDITIONS: Store in tightly closed original container, in a cool, dry & ventilated area away from heat sources & protected from light. Keep air contact to a minimum.

FIRE PROTECTION: Keep away from ignition sources & naked flames. Take precautions to avoid static discharges in working area.

8. Exposure Controls/Personal Protection

RESPIRATORY PROTECTION: Avoid breathing product vapour. Apply local ventilation where possible.

VENTILATION: Ensure good ventilation of working area.

HAND PROTECTION: Avoid all skin contact. Use chemically resistant gloves if required.

EYE PROTECTION: Use safety glasses.

WORK / HYGIENE PRACTICES: Wash hands with soap & water after handling.

9. Physical & Chemical Properties

COLOUR: Colourless to pale yellow

APPEARANCE: Clear mobile liquid

ODOUR: Characteristic, typical pine

FLASH POINT °C: 45

SPECIFIC GRAVITY @ 20°C: 0.860 – 0.880

OPTICAL ROTATION @ 20°C: -20° to -40°

REFRACTIVE INDEX @ 20°C: 1.465 – 1.475

SOLUBILITY IN 75% ETHANOL @ 20°C: 1 + 6 max, sometimes with opalescence

SOLUBILITY IN VEGETABLE OILS: Soluble

SOLUBILITY IN WATER: Insoluble

Typical Analysis by GLC/GCMS:

CONSTITUENT	PERCENTAGE
Alpha Pinene	60.2
Camphene	2.9
Beta Pinene	9.5
Delta-3-carene	11.1
Myrcene	3.6
Limonene	4.1
Beta phyllandrene	1.2
Gamma Terpinene	1.1
p-cymene	1.5
Terpinolene	0.9
Bornyl acetate	1.2
Terpinen-4-ol	0.8

10. Stability & Reactivity

REACTIVITY: It presents no significant reactivity hazards, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

DECOMPOSITION: Liable to cause smoke & acrid fumes during combustion: carbon monoxide, carbon dioxide and other non-identified organic compounds may be formed.

11. Toxicological Information

Acute oral LD50: >5g/Kg. Found to non-irritating, non-sensitizing, non-phototoxic: see *FCT* 1976 **14** p845.
(Fresh oils show the above properties: it is likely that older pine oils become irritants from the build up of peroxides of delta-3-carene and limonene etc.

12. Ecological Information

BIODEGRADABILITY: Data not available

PRECAUTIONS: Prevent surface contamination of soil, ground & surface water.

13. Disposal Considerations

Avoid disposing to drainage systems and into the environment. Seek expert advice.

14. Transport Regulations

ROAD (ADR/RID): Class 3 item 31/c RID NO 301; ADR RN N/2301
AIR (IATA/ICAO): Class 3 Packing group III UN 1993
SEA (IMDG): 3345 Class 3 UN No: 1993
CHIP: See section 15

15. Regulatory Information According to Directive 88/379/EEC

HAZARDS: n/a
SYMBOLS: n/a
RISK PHRASES: R10: Flammable Liquid
SAFETY PHRASES: S16: Keep away from sources of ignition: No Smoking

16. Other Information

Conc. % Limits

PACKAGING:	TYPE	SUITABILITY
	Glass	Yes
	Lacquer lined steel/tin	Yes
	Aluminums	Yes
	HPPE	No
	F/HDPE	Yes
	Other Plastic	No

SHELF LIFE

Minimum 12 months when stored within advised conditions. Re-test after 12 months then every 3 months, up to a maximum of 36 months.

Q.C REQUIREMENTS

In-line with general product specification. Always satisfy suitability for specific application.

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