

Safety Data Sheet — 1,8-Cineole (Eucalyptol) 99.9%

Document Reference: OLE-SDS-EUC-001 **Revision:** 1.0 **Date of issue:** 15 October 2026 **Prepared in accordance with:** Work Health and Safety Regulations 2011 (Cth) and the Safe Work Australia Code of Practice *Preparation of Safety Data Sheets for Hazardous Chemicals*; GHS Revision 7 as adopted in Australia; EU Regulation (EC) 1907/2006 Annex II format.

Section 1 — Identification of the Substance and of the Company

Field	Detail
Product identifier	1,8-Cineole (Eucalyptol) 99.9%
Other names	Eucalyptol; Cineole; 1,8-Epoxy-p-menthane; 1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane; Cajeputol
CAS number	470-82-6
EC number	207-431-5
FEMA number	2465
Molecular formula	C ₁₀ H ₁₈ O
Recommended use	Fragrance, flavour and cosmetic raw material; aromatherapy isolate; industrial use as an ingredient in formulated products.
Uses advised against	Not supplied for direct use as a medicine or food; not for use undiluted on skin.
Supplier	Oleinza Oils Pty Ltd, trading as Oleinza Naturals
Address	9 Gawan Loop, Coburg North VIC 3058, Australia
Telephone	+61 417 399 798
Email	info@oleinza oils.com.au
Emergency telephone (Australia)	Poisons Information Centre 13 11 26 (24 hours). Fire, police, ambulance 000.
Emergency telephone (international)	+61 417 399 798 (business hours AEST)

Section 2 — Hazards Identification

Classification of the substance (GHS, as adopted under the WHS Regulations and EU CLP 1272/2008):

Hazard class	Category	Hazard statement
Flammable liquids	Category 3	H226 Flammable liquid and vapour
Skin sensitisation	Category 1B	H317 May cause an allergic skin reaction

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Classified as a hazardous chemical according to the WHS Regulations 2011 and as hazardous according to the criteria of Safe Work Australia. Classified as a Dangerous Good for transport (Class 3).

Label elements

Element	Detail
Pictograms	GHS02 (Flame), GHS07 (Exclamation mark)
Signal word	WARNING
Hazard statements	H226 Flammable liquid and vapour. H317 May cause an allergic skin reaction.
Precautionary — prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical, ventilating and lighting equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P261 Avoid breathing vapour or mist. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, protective clothing and eye protection.
Precautionary — response	P302+P352 IF ON SKIN: Wash with plenty of water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P333+P313 If skin irritation or rash occurs: Get medical advice. P362+P364 Take off contaminated clothing and wash it before reuse. P370+P378 In case of fire: Use alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
Precautionary — storage	P403+P235 Store in a well-ventilated place. Keep cool.
Precautionary — disposal	P501 Dispose of contents and container in accordance with local, state and national regulations.

Other hazards: Vapour is heavier than air and may travel to a source of ignition and flash back. Substance is a mild irritant to eyes and mucous membranes at high vapour concentration. Harmful to aquatic life in large releases (not classified; see Section 12). Not PBT/vPvB.

Section 3 — Composition / Information on Ingredients

Ingredient	CAS	EC	Concentration (% w/w)	GHS classification
1,8-Cineole (Eucalyptol)	470-82-6	207-431-5	≥ 99.5 (typical 99.9)	Flam. Liq. 3 (H226); Skin Sens. 1B (H317)
Other monoterpenes (α-pinene, limonene, p-cymene, α-terpineol), total	various	—	≤ 0.5	Below classification cut-offs at these concentrations

Substance of natural (eucalyptus) origin isolated by physical distillation processes. No additives, stabilisers or carriers.

Section 4 — First Aid Measures

Route	Measures
Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist (headache, dizziness, nausea, respiratory irritation), seek medical attention.
Skin contact	Remove contaminated clothing. Wash skin thoroughly with soap and water. If rash, redness or irritation develops, seek medical advice. Wash clothing before reuse.
Eye contact	Rinse cautiously with water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.
Ingestion	Do NOT induce vomiting (aspiration hazard for low-viscosity terpenes). Rinse mouth with water. Never give anything by mouth to an unconscious person. Contact the Poisons Information Centre (13 11 26) or a doctor immediately.

Most important symptoms and effects, acute and delayed: Ingestion of eucalyptol in quantity causes central nervous system depression, nausea, vomiting, drowsiness, ataxia and, in severe cases, convulsions; children are particularly susceptible. Repeated skin contact may cause allergic contact dermatitis in sensitised individuals.

Indication of immediate medical attention: Treat symptomatically. Consider gastric decontamination only on medical advice following significant ingestion. Observe for CNS depression and aspiration.

Section 5 — Firefighting Measures

Item	Detail
Suitable extinguishing media	Alcohol-resistant foam, dry chemical powder, carbon dioxide, water fog.
Unsuitable media	Full water jet (spreads burning liquid).
Specific hazards	Flammable liquid, flash point 49 °C. Vapour forms explosive mixtures with air at or above the flash point and is heavier than air; may accumulate in low areas and flash back. Containers may rupture on heating. Combustion products: carbon monoxide, carbon dioxide, irritating organic vapours.
Advice for firefighters	Wear self-contained breathing apparatus and full protective clothing. Cool exposed containers with water spray. Contain firefighting water; prevent entry to drains.
Hazchem code	3Y (UN 1993, PG III; confirm against the consignment note)

Section 6 — Accidental Release Measures

Item	Detail
Personal precautions	Eliminate all ignition sources. Ventilate the area. Wear PPE as in Section 8. Avoid breathing vapour and contact with skin and eyes. Keep unprotected persons away.
Environmental precautions	Prevent entry to drains, surface water and soil. Notify the relevant environmental authority if a significant release reaches waterways.
Containment and clean-up	Stop the leak if safe to do so. Absorb spills with inert, non-combustible absorbent (sand, vermiculite, diatomaceous earth). Use non-sparking tools. Collect into labelled, closed containers for disposal (Section 13). Wash the spill area with water and detergent; do not flush residue to drains.
Reference	Sections 8 and 13

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Section 7 — Handling and Storage

Item	Detail
Safe handling	Use in well-ventilated areas with local exhaust where vapour may be generated. Keep away from heat, sparks and open flames. Earth and bond drums, IBCs and receiving equipment during transfer. Use intrinsically safe or explosion-protected pumps and electrical equipment in the handling area. Avoid contact with skin and eyes; wash hands after handling. Do not eat, drink or smoke in handling areas. Contaminated clothing should not be taken out of the workplace.
Storage conditions	Store in a cool, dry, well-ventilated area designated for Class 3 flammable liquids, in accordance with AS 1940 <i>The storage and handling of flammable and combustible liquids</i> . Keep containers tightly closed; blanket with nitrogen after partial use to limit oxidation. Store below 25 °C, away from direct sunlight. Keep away from oxidising agents and strong acids. Bunded storage required.
Packaging materials	Lacquer-lined steel drums (UN-rated), stainless steel, HDPE (short-term), glass. Avoid natural rubber and some plastics (swelling).
Specific end uses	Fragrance, flavour and cosmetic raw material. Follow IFRA and customer formulation limits in finished products.

Section 8 — Exposure Controls / Personal Protection

Exposure standards: No workplace exposure standard has been assigned to 1,8-cineole by Safe Work Australia, ACGIH or the EU. Control exposure to vapour as low as reasonably practicable; an in-house guidance value of 10 ppm (8-hour TWA) is applied at Oleinza sites by analogy with similar terpenoids.

Biological limit values: None established.

Control	Detail
Engineering controls	Local exhaust ventilation at transfer, sampling and filling points; general dilution ventilation; explosion-protected equipment in Zone 1/2 areas. Eye-wash station and safety shower in the work area.
Eye / face protection	Chemical safety goggles (AS/NZS 1337.1) where splashing is possible.
Skin protection	Nitrile gloves (minimum 0.4 mm, breakthrough > 480 min for incidental contact; replace on contamination). Butyl rubber for prolonged immersion. Long-sleeved cotton or antistatic work clothing; chemical-resistant apron for transfers.
Respiratory protection	Not normally required with adequate ventilation. For vapour above the guidance value or in confined spaces use a half-face respirator with organic vapour cartridge (AS/NZS 1716, Type A).
Hygiene measures	Wash hands before breaks and at the end of work. Launder contaminated clothing separately.
Environmental exposure controls	Prevent release to drains and waterways.

Section 9 — Physical and Chemical Properties

Property	Value
Appearance	Clear, colourless, mobile liquid
Odour	Fresh, camphoraceous, eucalyptus-like

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Property	Value
Odour threshold	Approximately 0.01–0.1 ppm (literature)
pH	Not applicable (non-aqueous)
Melting / freezing point	1–2 °C
Boiling point / range	176–177 °C at 101.3 kPa
Flash point	49 °C (closed cup)
Evaporation rate	Slower than ether; no data
Flammability	Flammable liquid (Category 3)
Lower / upper explosive limit	Not determined; assume approximately 1–8 % v/v by analogy with monoterpenes
Vapour pressure	1.2–1.9 hPa at 20 °C
Vapour density (air = 1)	5.3
Relative density	0.921–0.924 at 25/25 °C
Water solubility	Approximately 3.5 g/L at 21 °C (slightly soluble)
Partition coefficient (log K _{ow})	2.74
Autoignition temperature	No reliable data; treat as > 200 °C
Decomposition temperature	No data
Kinematic viscosity	3.4 mm ² /s at 20 °C
Refractive index	1.455–1.460 at 20 °C
Molecular weight	154.25 g/mol

Section 10 — Stability and Reactivity

Item	Detail
Reactivity	Not reactive under normal conditions.
Chemical stability	Stable under recommended storage. Slowly oxidises on prolonged exposure to air and light.
Possibility of hazardous reactions	Vapour may form explosive mixtures with air. Reacts with strong oxidisers.
Conditions to avoid	Heat, open flames, sparks, static discharge, direct sunlight, prolonged air exposure.
Incompatible materials	Strong oxidising agents, strong acids.
Hazardous decomposition products	On combustion: carbon oxides and irritating organic fumes.

Section 11 — Toxicological Information

Endpoint	Information
Acute oral toxicity	LD ₅₀ (rat) 2,480 mg/kg bw (literature). Not classified.
Acute dermal toxicity	LD ₅₀ (rabbit) > 5,000 mg/kg bw (literature). Not classified.

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Endpoint	Information
Acute inhalation toxicity	No reliable data. High vapour concentrations cause headache, dizziness and nausea.
Skin corrosion / irritation	Mild irritant on prolonged contact; not classified.
Serious eye damage / irritation	Mild to moderate irritant (vapour and liquid); not classified at the data available.
Respiratory sensitisation	No data indicating respiratory sensitisation.
Skin sensitisation	Classified Skin Sens. 1B (H317). Oxidised material (hydroperoxides) is the main sensitising risk; keep material fresh and under nitrogen.
Germ cell mutagenicity	Negative in Ames and mammalian cell assays (literature). Not classified.
Carcinogenicity	Not listed by IARC, NTP or ACGIH. Not classified.
Reproductive toxicity	No evidence of reproductive or developmental toxicity at relevant exposures. Not classified.
STOT — single exposure	High vapour concentrations may cause drowsiness and dizziness; not classified at the data available.
STOT — repeated exposure	No data indicating target-organ toxicity from repeated exposure at occupational levels.
Aspiration hazard	Low-viscosity terpenoid; aspiration into the lungs after ingestion may cause chemical pneumonitis. Kinematic viscosity 3.4 mm ² /s is above the Category 1 cut-off (≤ 20.5 mm ² /s applies for classification; data are insufficient for formal classification). Do not induce vomiting.
Human experience	Ingestion of eucalyptus oil (predominantly 1,8-cineole) has caused serious poisoning, especially in children; small doses (a few millilitres) can produce CNS depression.

Section 12 — Ecological Information

Endpoint	Information
Aquatic toxicity	Fish 96-h LC ₅₀ reported in the range 10–100 mg/L (literature on eucalyptol and cineole-rich eucalyptus oil). Harmful to aquatic life; not classified by the supplier pending substance-specific data.
Persistence and degradability	Readily biodegradable (> 60 % in 28 days, literature).
Bioaccumulative potential	Low (log Kow 2.74).
Mobility in soil	Moderate; volatile from soil and water surfaces.
PBT / vPvB assessment	Not PBT, not vPvB.
Other adverse effects	None known.

Section 13 — Disposal Considerations

Item	Detail
Product	Dispose of as flammable liquid waste through a licensed waste contractor. Incineration with energy recovery is preferred. Do not discharge to drains or waterways.
Contaminated packaging	Triple-rinse or treat as hazardous waste. Empty drums retain vapour and remain a fire hazard: do not cut, weld or expose to heat. Return UN-rated drums to a licensed reconditioner.

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Item	Detail
Regulations	Dispose of in accordance with the Environment Protection Act 2017 (Vic), equivalent state legislation and local council requirements.

Section 14 — Transport Information

Field	ADG Code (road/rail)	IMDG (sea)	IATA (air)
UN number	UN 1993	UN 1993	UN 1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (Eucalyptol)	FLAMMABLE LIQUID, N.O.S. (Eucalyptol)	Flammable liquid, n.o.s. (Eucalyptol)
Class	3	3	3
Packing group	III	III	III
Hazchem / EmS	3Y	F-E, S-E	—
Marine pollutant	No	No	—
Special precautions	Keep away from ignition sources; segregate from oxidisers (Class 5.1). Limited-quantity provisions apply to inner packagings ≤ 5 L.		
Transport in bulk (MARPOL Annex II / IBC Code)	Not applicable to drum and IBC consignments.		

Section 15 — Regulatory Information

Regulation	Status
Australian Inventory of Industrial Chemicals (AICIS)	Listed
Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP / Poisons Standard)	Eucalyptus oil and cineole are Schedule 5 / Schedule 6 when supplied in retail packs for therapeutic or household use; industrial supply to manufacturers in bulk packaging is outside the retail scheduling provisions. Confirm scheduling for any retail pack.

Regulation	Status
WHS Regulations 2011	Hazardous chemical; Dangerous Good (Class 3). Keep this SDS at the workplace and in the hazardous chemicals register. Placarding and manifest thresholds for Class 3 PG III apply at 1,000 L / 10,000 L respectively (Schedule 11).
AS 1940	Flammable and combustible liquids storage and handling applies.
EU REACH (EC) 1907/2006	Pre-registered / registered substance; importers to the EU must hold or rely on a registration above 1 t/yr.
EU CLP (EC) 1272/2008	Self-classified as above; no harmonised classification entry in Annex VI.
EU Cosmetics Regulation (EC) 1223/2009	Permitted ingredient (INCI: Eucalyptol); not an Annex III listed allergen.
IFRA Standards	Not a restricted material; apply category limits to finished compositions.
US TSCA	Listed.
FDA 21 CFR 172.515 / FEMA 2465	Synthetic flavouring substance permitted / GRAS flavouring.
Chemical safety assessment	Not performed by the supplier.

Section 16 — Other Information

Item	Detail
Revision history	Rev 1.0, 15 October 2026: first issue.

Item	Detail
Key data sources	ECHA C&L Inventory and registration dossiers (CAS 470-82-6); Safe Work Australia Hazardous Chemical Information System; NIOSH / ACGIH documentation; OECD SIDS and published toxicology on eucalyptol and eucalyptus oil; supplier SDSs for Eucalyptol USP/FCC; Oleinza Naturals product specification OLE-SPEC-EUC-001 Rev 2.0.
Abbreviations	ADG: Australian Dangerous Goods Code; AICIS: Australian Industrial Chemicals Introduction Scheme; CLP: Classification, Labelling and Packaging; GHS: Globally Harmonised System; IFRA: International Fragrance Association; LC ₅₀ /LD ₅₀ : lethal concentration/dose, 50 %; PBT: persistent, bioaccumulative, toxic; PG: packing group; STOT: specific target organ toxicity; SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons; TWA: time-weighted average; WHS: Work Health and Safety.
Full text of H-statements in Section 3	H226 Flammable liquid and vapour. H317 May cause an allergic skin reaction.
Training advice	Workers handling this product should be trained in flammable liquid handling (AS 1940), static control, PPE use and spill response.
Disclaimer	The information in this SDS is given in good faith and is believed to be accurate at the date of issue. It relates only to the specific material designated and may not be valid where the material is combined with other substances or used in any process. It is the user's responsibility to determine the suitability of the information for their particular use and to comply with all applicable laws and regulations. Oleinza Oils Pty Ltd accepts no liability for loss or damage arising from reliance on this information.

End of Safety Data Sheet