SAFETY DATA SHEET
CITRONELLA OIL
REVISION 4, DATE 22/08/2024

1. IDENTIFICATION

Product Name	**Citronella Oil**
Other Names	Cymbopogon nardus, extract [CAS#89998-15-2]; Cymbopogon winterianus, extract [CAS#91771-61-8]
Uses	Use as fragrance compound, odorant, perfumery and other applications.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Oils, citronella
Product Description	Citronella oil is obtained by steam distillation from the grass of Cymbopogon winterianus or steam distillation of the dried aerial parts of Cymbopogon nardus.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Aurora Cleaning Supplies	F1 / 5 Bungaleen Court Dandenong South VIC 3175	03 9768 2669

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	Not Scheduled

Globally Harmonised System

Hazard Classification

Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories

Flammable Liquids - Category 4

Serious Eye Damage/Irritation - Category 1

Sensitisation (Skin) - Category 1

Aspiration Hazard - Category 1

Long-term Hazard To The Aquatic Environment - Category 2

Pictograms

Signal Word

Danger

Hazard Statements

H227	Combustible liquid.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention	**P261**	Avoid breathing mist/vapours/spray.
	P273	Avoid release to the environment.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P280	Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator.
Response	**P305 + P351 + P338 + P310**	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
	P331	Do NOT induce vomiting.
	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P333 + P313	If skin irritation or rash occurs: Get medical attention.
	P391	Collect spillage.
	P370 + P378	In case of fire: Use carbon dioxide (CO2), dry chemical, alcohol resistant foam or water spray for extinction.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
Storage	**P403 + P235**	Store in a well-ventilated place. Keep cool.
	P405	Store locked up.
Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia
National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Citronella oil	Unspecified	8000-29-1	100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Do not rub affected area! Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice.
Skin	IF ON SKIN: Remove and isolate contaminated clothing and shoes. Immediately wash skin with plenty of soap and running water/shower. If skin irritation or rash occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse. *Contaminated work clothing should not be allowed out of the workplace.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet (SDS) to the doctor in attendance. *Most important symptoms and effects, both acute and delayed: Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation; Symptoms may include stinging, tearing, redness, swelling and blurred vision. May cause an allergic skin reaction; Dermatitis; Rash.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal.
Flammability Conditions	Combustible liquid; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not scatter spilled material with high-pressure water streams. *Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.

Fire and Explosion Hazard	Containers may explode when heated. Static charges generated by emptying package in or near flammable vapour may cause flash fire. The product is immiscible with water and will spread on the water surface.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic gases, including oxides of Carbon and other unidentified organic compounds. *In case of fire and/or explosion do not breathe fumes!
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	75 - 78 °C [Closed cup]
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material - Slippery when spilt. Avoid accidents, clean up immediately! Avoid breathing mist/vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13). *Never return spills in original containers for re-use.
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Dike far ahead of large spill for later disposal.
Decontamination	Clean surface thoroughly to remove residual contamination. Retain and dispose of contaminated wash water.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. Contact local authorities in case of spillage to drain/aquatic environment.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation, especially in confined areas. Handle with care and in accordance with good industrial hygiene and safety practice. Open slowly in order to control possible pressure release. Avoid breathing mist/vapours/spray and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator (see SECTION 8). Combustible liquid: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid release to the environment - Collect spillage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Protect against physical damage. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.

Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. *Use explosion-proof electrical/ventilating/lighting equipment.
Personal Protection Equipment	- Respiratory protection: Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided. Use with local exhaust ventilation or while wearing organic vapour/particulate respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Wear safety glasses with side shields (or goggles). Face shield is recommended. - Hand protection: Wear chemical-resistant protective gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Use of an impervious apron is recommended. Wear appropriate thermal protective clothing, when necessary.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash thoroughly after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	Strong, characteristic
Colour	Pale yellow to pale brown
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	231 °C
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Insoluble in water - Soluble in alcohol
Specific Gravity	0.875 - 0.920
Flash Point	75 - 78 °C [Closed cup]
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available

Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	The product is immiscible with water and will spread on the water surface.
Properties That May Initiate or Contribute to Fire Intensity	Combustible liquid; May burn but does not ignite readily. *Static charges generated by emptying package in or near flammable vapour may cause flash fire.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating and/or toxic gases, including oxides of Carbon and other unidentified organic compounds.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No dangerous reaction known under conditions of normal use.
Chemical Stability	Material is stable under normal conditions.
Conditions to Avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Take action to prevent static discharges.
Materials to Avoid	Incompatible/reactive with strong oxidising agents.
Hazardous Decomposition Products	No hazardous decomposition products if stored and handled as indicated and other unidentified organic compounds. Fire/decomposition may produce irritating and/or toxic gases, including oxides of Carbon and other unidentified organic compounds.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on toxicological effects: - Acute toxicity: May be harmful if swallowed, in contact with skin and if inhaled. - Skin corrosion/irritation: May cause skin irritation. - Eye damage/irritation: Causes serious eye damage. - Respiratory/skin sensitisation: May cause an allergic skin reaction. - Germ cell mutagenicity: No information available. - Carcinogenicity: No information available. - Reproductive toxicity: No information available. - STOT (single exposure): May cause respiratory tract irritation. - STOT (repeated exposure): No information available. - Aspiration toxicity: May be fatal if swallowed and enters airways. Information on likely routes of exposure: - Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration may cause pulmonary edema and pneumonitis. - Eye contact: Causes serious eye damage. May cause irreversible damage to eyes. Symptoms may include stinging, tearing, redness, swelling and blurred vision. - Skin contact: May cause skin irritation. May cause an allergic skin reaction; Dermatitis; Rash. - Inhalation: Material may be irritant to the mucous membranes of the respiratory tract (airways). Chronic effects: No information available.

Acute

Ingestion	Acute toxicity (Oral): - LD50, Rat: 7,200 mg/kg - LD50, Mouse: 4,600 mg/kg
Other	Acute toxicity (Dermal): - LD50, Rabbit: 4,700 mg/kg
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxic to aquatic life with long lasting effects.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	This material and its container must be disposed of in a safe manner and in accordance with local/regional/national/international regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.
Special Precautions for Land Fill	Contaminated packaging: Since emptied containers or liners may retain some product residues, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	Citronella Oil
Class	C1 Combustible Liquids - Flash Point >60°C - <=93°C, Closed Cup
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	AU01
Comments	Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs.

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronella Oil)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	•3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronella Oil)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	•3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronella Oil)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)
UN Number	3082
Hazchem	•3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (Vanuatu)

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronella Oil)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	•3Z
Pack Group	III
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronella Oil)

Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3082
Hazchem	•3Z
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-F
Marine Pollutant	Yes

Air Transport
IATA DGR

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronella Oil)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3082
Hazchem	•3Z
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	CITRONELLA OIL is listed in Appendix B, Part 3 of the SUSMP: Substances considered not to require control by scheduling (Low toxicity; Any use).
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR002574 - Food Additives and Fragrance Materials (Combustible) Group Standard 2020

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	294-954-7

Europe (REACh)	01-2120741487-48-XXXX
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	CITROO0001, CITROO1000, CITROO1001, CITROO1002, CITROO1003, CITROO1004, CITROO1005, CITROO1006, CITROO1050, CITROO2000, CITROO2001, CITROO3000, CITROO3001, CITROO4000, CITROO5000, CITROO6000, CITROO7000, CITROO7100, CITROO9000, CITROO9001, CITROO9050, CITROO9060
Revision	4
Revision Date	22/08/2024
Key/Legend	< Less Than > Greater Than **AICS** Australian Inventory of Chemical Substances **atm** Atmosphere **CAS** Chemical Abstracts Service (Registry Number) **cm^2** Square Centimetres **CO2** Carbon Dioxide **COD** Chemical Oxygen Demand **deg C (°C)** Degrees Celcius **EPA (New Zealand)** Environmental Protection Authority of New Zealand **deg F (°F)** Degrees Farenheit **g** Grams **g/cm^3** Grams per Cubic Centimetre **g/l** Grams per Litre **HSNO** Hazardous Substance and New Organism **IDLH** Immediately Dangerous to Life and Health **immiscible** Liquids are insoluable in each other. **inHg** Inch of Mercury **inH2O** Inch of Water **K** Kelvin **kg** Kilogram **kg/m^3** Kilograms per Cubic Metre **lb** Pound **LC50** LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. **LD50** LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. **ltr** or **L** Litre **m^3** Cubic Metre **mbar** Millibar **mg** Milligram **mg/24H** Milligrams per 24 Hours

mg/kg Milligrams per Kilogram
mg/m^3 Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight