

SAFETY DATA SHEET



Revision date: 30-Aug-2021

Revision Number 1

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name FOREST FERN (FCIA00973AB)

Product Code(s) 000000026682

Other means of identification

UN number 3082

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Fragrances.

Uses advised against No information available.

Supplier

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
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Australia

Telephone Number: +61 2 8717 2929

Facsimile: +61 2 9755 9611

Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

Flammable liquids	Category 4
Aspiration hazard	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

SIGNAL WORD

Danger

Label elements

Environment
Health hazard
Corrosion

**Hazard statements**

H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Keep away from flames and hot surfaces. - No smoking
Avoid breathing dust / fume / gas / mist / vapours / spray
Wash hands thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves / protective clothing / eye protection / face protection
Avoid release to the environment

Precautionary Statements - Response

Specific treatment (see First aid on this SDS)
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 CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
Avoid breathing vapour or spray mist.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do NOT induce vomiting
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet for extinction.
Collect spillage

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

Poisons Schedule (SUSMP) 6

3. COMPOSITION/INFORMATION ON INGREDIENTS**Mixture**

Chemical name	CAS No.	Weight-%
d-Limonene	5989-27-5	1-<10
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol)	106-24-1	1-<10
Alcohols	-	1-<10
Terpinolene	586-62-9	1-<10
Eugenol	97-53-0	1-<10
D,L-Citronellol	106-22-9	1-<10
Linalyl acetate	115-95-7	1-<10
1,6-Octadien-3-ol, 3,7-dimethyl- (Linalool)	78-70-6	1-<10
Benzyl salicylate	118-58-1	1-<10
Coumarin	91-64-5	1-<10
1,8-Cineole	470-82-6	1-<10
Fragrance ingredients present at non-hazardous concentrations	-	to 100

4. FIRST AID MEASURES**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Emergency telephone number	Poisons Information Center, Australia: 13 11 26 Poisons Information Center, New Zealand: 0800 764 766
Inhalation	Remove to fresh air. Call a physician if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes, and clothing. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives. Aspiration risk: may cause lung damage if swallowed.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Delayed pulmonary edema may occur. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

Unsuitable extinguishing media**Specific hazards arising from the chemical**

Specific hazards arising from the chemical Combustible material. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Environmentally hazardous.

Hazardous combustion products Carbon oxides.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem code •3Z

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal precautions Evacuate personnel to safe areas. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material. See section 8 for more information.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mists. Handle in accordance with good industrial hygiene and safety practice. Use personal protection equipment. Take precautionary measures against static discharges. Wash thoroughly after handling.

General hygiene considerations Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Store away from foodstuffs and sources of heat or ignition. Keep container closed when not in use.

Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

Incompatible materials Strong oxidizing agents.

Poisons Schedule (SUSMP) 6

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits No value assigned for this specific material by Safe Work Australia.

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing. Boots. Overalls.

Hand protection Wear suitable gloves. Impervious gloves.

Respiratory protection If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear
Color Pale Yellow to Yellow
Odor Aromatic Green Woody Musk
Odor threshold No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	No data available	
Boiling point / boiling range	No data available	
Flash point	74°C	CC (closed cup)
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	
Vapor density	No data available	
Relative density	0.9490-0.9690 @20°C	
Water solubility	No data available	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Static discharge (electrostatic discharge). Direct sunlight.

Incompatible materials

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation May cause irritation.

Eye contact Causes serious eye damage.

Skin contact Irritating to skin. May cause sensitization by skin contact.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives. Aspiration risk: may cause lung damage if swallowed.

Numerical measures of toxicity - Product Information

No information available.

Numerical measures of toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
d-Limonene	= 5200 mg/kg (Rat) = 4400 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol)	= 3600 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
Terpinolene	= 4390 mg/kg (Rat)	-	-
Eugenol	= 1930 mg/kg (Rat)	-	-
D,L-Citronellol	= 3450 mg/kg (Rat)	= 2650 mg/kg (Rabbit)	-
Linalyl acetate	= 14550 mg/kg (Rat) = 13934 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-
1,6-Octadien-3-ol, 3,7-dimethyl- (Linalool)	= 2790 mg/kg (Rat)	= 5610 mg/kg (Rat)	-
Benzyl salicylate	= 2227 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-
Coumarin	= 293 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

1,8-Cineole	= 2480 mg/kg (Rat)	-	-
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See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin. Classification is based on mixture calculation methods based on component data.
Serious eye damage/eye irritation	Causes serious eye damage. Classification is based on mixture calculation methods based on component data.
Respiratory or skin sensitization	May cause sensitization by skin contact. Classification is based on mixture calculation methods based on component data.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	Risk of serious damage to the lungs (by aspiration). May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
d-Limonene	-	LC50: 0.619 - 0.796mg/L (96h, Pimephales promelas) LC50: =35mg/L (96h, Oncorhynchus mykiss)	-	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol)	-	LC50: =22mg/L (96h, Danio rerio)	-	-
Terpinolene	-	LC50: =0.805mg/L (96h, Danio rerio)	-	-
Eugenol	-	LC50: =13mg/L (96h, Danio rerio)	-	-
Linalyl acetate	-	LC50: =11mg/L (96h, Cyprinus carpio)	-	-
1,6-Octadien-3-ol, 3,7-dimethyl- (Linalool)	EC50: =88.3mg/L (96h, Desmodesmus subspicatus)	LC50: =27.8mg/L (96h, Oncorhynchus mykiss) LC50: 22 - 46mg/L (96h, Leuciscus idus)	-	EC50: =20mg/L (48h, Daphnia magna)
Benzyl salicylate	-	LC50: =1.03mg/L (96h, Danio rerio)	-	-
1,8-Cineole	-	LC50: 95.4 - 109mg/L	-	-

		(96h, Pimephales promelas)		
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Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
1,6-Octadien-3-ol, 3,7-dimethyl- (Linalool)	2.84 - 3.1

Mobility

Mobility in soil No information available.

Other adverse effects**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

14. TRANSPORT INFORMATION**ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN number 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS D-LIMONENE)
Hazard class 9
Packing group III
Hazchem code •3Z

IATA

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number 3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS D-LIMONENE)
Transport hazard class(es) 9
Packing group III

IMDG

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number 3082

UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS D-LIMONENE)
Transport hazard class(es)	9
Packing group	III
IMDG EMS Fire	F-A
IMDG EMS Spill	S-F
Marine pollutant	Yes

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Australia

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

Poisons Schedule (SUSMP) 6

National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
d-Limonene - 5989-27-5	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

International Inventories

AIIC

All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

Legend:

- Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Reason(s) For Issue: First Issue Primary SDS

Issuing Date: 30-Aug-2021

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Revision Note:

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australian Industrial Chemicals Introduction Scheme (AICIS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 RTECS (Registry of Toxic Effects of Chemical Substances)
 World Health Organization

Disclaimer

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris.

End of Safety Data Sheet