

# SAFETY DATA SHEET



Revision date: 23-Sep-2024

Revision Number 5

## Section 1: Identification

### Product identifier

**Product Name** FRAGRANCE LEMON CITRUS F42470

**Product Code(s)** 000000037177

### Other means of identification

**UN number or ID number** 3082

### Recommended use of the chemical and restrictions on use

**Recommended use** Fragrances.

**Uses advised against** No information available.

### Details of manufacturer or importer

#### Supplier

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia  
ABN:51 600 546 512  
70 Marple Avenue  
Villawood NSW 2163  
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.

## Section 2: Hazard identification

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).  
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

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.

### GHS Classification

<b>Flammable liquids</b>	Category 4
<b>Aspiration hazard</b>	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

**Label elements**

Health hazard  
Exclamation mark  
Environment

**Signal word**

DANGER

**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  
H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements - Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/clothing and eye/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 skin irritation or rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.  
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 to extinguish..  
Collect spillage.

**Precautionary Statements - Storage**

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

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

**Other hazards which do not result in classification**

Toxic to aquatic life.

**Section 3: Composition and information on ingredients**

Chemical name	CAS No.	Weight-%
Citral	5392-40-5	10-<30
Pine oil	8002-09-3	1-<10
d-Limonene	5989-27-5	1-<10
Terpenes and terpenoids, lemon oil	68917-33-9	1-<10
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol)	106-24-1	1-<10
Dipentene	138-86-3	1-<10
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	106-25-2	1-<10
Coumarin	91-64-5	1-<10
Oils, lime	8008-26-2	1-<10
Litsea cubeba oil	68855-99-2	1-<10
Fragrance ingredients present at non-hazardous concentrations	-	to 100

## Section 4: First aid measures

### Description of first aid measures

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Emergency telephone number</b>	
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. (Call a physician if symptoms occur).
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area. Get medical attention immediately if symptoms occur.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Irritating. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives. Aspiration risk: may cause lung damage if swallowed.
<b>Effects of Exposure</b>	No information available.

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	May cause sensitization by skin contact. Delayed pulmonary edema may occur. Can cause corneal burns. Treat symptomatically.
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## Section 5: Firefighting measures

### Suitable Extinguishing Media

<b>Suitable extinguishing media</b>	Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.
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**Unsuitable extinguishing media** No information available.

#### **Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Combustible liquid. On burning will emit toxic fumes, including those of oxides of carbon. In the event of fire, cool tanks with water spray. Environmentally hazardous. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Hazardous combustion products** Oxides of carbon.

#### **Special protective actions for fire-fighters**

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

**Hazchem code** •3Z

### **Section 6: Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

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

**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. Shut off ignition sources. Clear area of all unprotected personnel.

#### **Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Refer to protective measures listed in Sections 7 and 8. See Section 12 for additional Ecological Information.

#### **Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. 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. Remove ignition sources. Provide adequate ventilation.

**Methods for cleaning up** Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Use non-sparking tools. Slippery when spilt. Avoid accidents, clean up immediately.

### **Section 7: Handling and storage**

#### **Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Take off contaminated clothing and wash before reuse. Wash thoroughly after handling. Use personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Use according to package label instructions. Keep out of reach of children.

**General hygiene considerations** Do not eat, drink or smoke when using this product. 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 or clothing. Wear suitable gloves and eye/face protection.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Protect from sunlight. Keep container closed when not in use. Do not contaminate food or feed stuffs.

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. Store away from incompatible materials described in Section 10.

**Incompatible materials** Oxidizing agent.

## **Section 8: Exposure controls and personal protection**

### Control parameters

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

Chemical name	Australia	New Zealand	ACGIH TLV
Citral 5392-40-5	-	-	TWA: 5 ppm inhalable fraction and vapor Sk* dermal sensitizer

Chemical name	European Union	United Kingdom	Germany DFG
d-Limonene 5989-27-5	-	-	TWA: 5 ppm TWA: 28 mg/m <sup>3</sup> Peak: 20 ppm Peak: 112 mg/m <sup>3</sup> Sk* skin sensitizer
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol) 106-24-1	-	-	skin sensitizer
Dipentene 138-86-3	-	-	skin sensitizer

### Appropriate engineering controls

**Engineering controls** Ensure adequate ventilation, especially in confined areas. Eyewash stations.

### 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.



<b>Eye/face protection</b>	Tight sealing safety goggles.
<b>Skin and body protection</b>	Wear suitable protective clothing. Boots. Overalls.
<b>Hand protection</b>	Impervious gloves.
<b>Respiratory protection</b>	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.
<b>Environmental exposure controls</b>	No information available.
<b>Thermal hazards</b>	No information available.

## Section 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear
<b>Color</b>	Colourless to Yellow
<b>Odor</b>	Sweet , Green , Lemony , citrusy , Floral and Woody
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	
<b>Boiling point / boiling range</b>	No data available	
<b>Flash point</b>	72 °C	CC (closed cup)
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	
<b>Vapor density</b>	No data available	
<b>Relative density</b>	0.9430 - 0.9630 @20°C	
<b>Water solubility</b>	No data available	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

## Section 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. Do not contaminate food or feed stuffs.**Incompatible materials****Incompatible materials** Oxidizing agent.**Hazardous decomposition products****Hazardous decomposition products** Oxides of carbon.**Section 11: Toxicological information****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. Can result in permanent injury.**Skin contact** Causes skin irritation. May cause sensitization by skin contact.**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways.**Symptoms** Irritating. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives. Aspiration risk: may cause lung damage if swallowed.**Acute toxicity****Numerical measures of toxicity - Product Information**

No information available

**Numerical measures of toxicity - Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Citral	= 4960 mg/kg ( Rat )	= 2250 mg/kg ( Rabbit )	-
Pine oil	= 3200 mg/kg ( Rat )	= 400 mg/kg ( Rabbit )	> 3.79 mg/L ( Rat ) 4 h
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 )	-
Dipentene	= 5300 mg/kg ( Rat )	-	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	= 4500 mg/kg ( Rat )	> 5 g/kg ( Rabbit )	-
Coumarin	> 5000 mg/kg ( Rat )	= 293 mg/kg ( Rat )	-
Oils, lime	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	-
Litsea cubeba oil	> 5 g/kg ( Rat )	-	-

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** Causes skin irritation. 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**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	Australia	European Union	IARC
d-Limonene - 5989-27-5	-	-	Group 3
Coumarin - 91-64-5	-	-	Group 3

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** May be fatal if swallowed and enters airways. Risk of serious damage to the lungs (by aspiration).



**Section 12: Ecological information****Ecotoxicity****Aquatic ecotoxicity**

Toxic to aquatic life with long lasting effects. Avoid contaminating waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Citral	EC50: =16mg/L (72h, <i>Desmodesmus subspicatus</i> ) EC50: =19mg/L (96h, <i>Desmodesmus subspicatus</i> )	-	-	EC50: =7mg/L (48h, <i>Daphnia magna</i> )
Pine oil	-	-	-	EC50: 17 - 28mg/L (48h, <i>Daphnia magna</i> )
d-Limonene	-	LC50: 0.619 - 0.796mg/L (96h, <i>Pimephales promelas</i> ) LC50: =35mg/L (96h, <i>Oncorhynchus mykiss</i> )	-	LC50 <i>Daphnia magna</i> (Water flea) 0.577 mg/L/48 hr (1)
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol)	-	LC50: =22mg/L (96h, <i>Danio rerio</i> )	-	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	-	LC50: =20.3mg/L (96h, <i>Danio rerio</i> )	-	-

**Terrestrial ecotoxicity**

There is no data for this product.

**Persistence and degradability****Persistence and degradability**

No information available.

**Bioaccumulative potential****Bioaccumulation**

There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Citral	2.76
d-Limonene	4.23
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol)	2.6
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	2.76

**Mobility****Mobility**

No information available.

**Other adverse effects****Other adverse effects**

No information available.

**Section 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. Dispose of in accordance with federal, state and local regulations.

See section 8 for more information

**Section 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.

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.

**UN number or ID number  
Proper shipping name**

3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS D-LIMONENE)

**Transport hazard class(es)  
Packing group  
Hazchem code**

9  
III  
•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  
UN proper shipping name**

3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS D-LIMONENE)

**Transport hazard class(es)  
Packing group**

9  
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  
UN proper shipping name**

3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS D-LIMONENE)

**Transport hazard class(es)  
Packing group  
IMDG EMS Fire  
IMDG EMS Spill**

9  
III  
F-A  
S-F

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available

**Section 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).  
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

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.

See section 8 for national exposure control parameters

#### Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 5

#### Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Citral - 5392-40-5	Present	-
Pine oil - 8002-09-3	Present	-
d-Limonene - 5989-27-5	Present	Specific information requirement: Obligations to provide information apply. You must tell us within 28 days if the circumstances of your importation or manufacture (introduction) are different to those in our assessment.
Terpenes and terpenoids, lemon oil - 68917-33-9	Present	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (E)- (Geraniol) - 106-24-1	Present	-
Dipentene - 138-86-3	Present	Specific information requirement: Obligations to provide information apply. You must tell us within 28 days if the circumstances of your importation or manufacture (introduction) are different to those in our assessment.
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol) - 106-25-2	Present	-
Coumarin - 91-64-5	Present	-
Oils, lime - 8008-26-2	Present	-
Litsea cubeba oil - 68855-99-2	Present	-
Fragrance ingredients present at non-hazardous concentrations - -	Present	-

#### Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

#### 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

Dipentene - 138-86-3	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
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**International Inventories**

<b>AIIC</b>	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.
<b>NZIoC</b>	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.
<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.

**Legend:****AIIC** AIIC- Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**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**Section 16: Other information**

<b>Reason(s) For Issue:</b>	Revised Primary SDS
<b>Prepared By</b>	This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).
<b>Revision date:</b>	23-Sep-2024

**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**

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

**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**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
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)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
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)  
U.S. 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  
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 and Australian Botanical Products.**

**End of Safety Data Sheet**