

# SAFETY DATA SHEET



Revision date: 11-Oct-2023

Revision Number 5

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** LEMON OIL HA1007 (FALEM57062) (NZ)

**Product Code(s)** 000000034570

### Other means of identification

**UN number** 1197

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

**Recommended use** Flavour.

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### Supplier

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia  
Street Address: 166 Totara Street  
Mt Maunganui South  
New Zealand

Telephone Number: +64 9 309 2528

Facsimile: +64 9 0508 366 364

### For further information, please contact

**Contact Point** Product Safety Department

### Emergency telephone number

**Emergency Telephone** 0 800 734 607 (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

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

### GHS Classification

#### **SIGNAL WORD**

Danger

Food Additives and Fragrance Materials (Flammable) Group Standard 2020

Approval Number: HSR002576

Flammable liquids	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

#### Label elements



#### **Hazard statements**

H226 - Flammable liquid and vapor

H315 - Causes skin irritation

H318 - Causes serious eye damage

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

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

H410 - Very 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

Keep container tightly closed

Ground and bond container and receiving equipment

Use explosion-proof electrical, ventilating, lighting equipment

Use non-sparking tools

Take action to prevent static discharges

Do not breathe fume, gas, mist, vapours, spray

Wash hands thoroughly after handling

Wear protective gloves / protective clothing / eye protection / face protection

#### **Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)

Get medical advice/attention if you feel unwell

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 (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

In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

#### **Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

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

No information available

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

#### **Mixture**

Chemical name	CAS No.	Weight-%
d-Limonene	5989-27-5	>60%
Lemon oil	8008-56-8	1-<10%
Citral	5392-40-5	1-<10%

#### 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>	Poisons Information Center, New Zealand: 0800 764 766 Poisons Information Center, Australia: 13 11 26
<b>Inhalation</b>	Remove to fresh air. 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. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician if symptoms occur.
<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. Get medical attention if symptoms occur.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.

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

<b>Symptoms</b>	Irritation. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives.
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##### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Can cause corneal burns. May cause sensitization by skin contact. Treat symptomatically.
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#### 5. FIRE FIGHTING MEASURES

##### Suitable Extinguishing Media

<b>Suitable Extinguishing Media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical.
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<b>Unsuitable extinguishing media</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
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##### Specific hazards arising from the chemical

<b>Specific hazards arising from the chemical</b>	Flammable. Risk of ignition. Keep product and empty container away from heat and sources of ignition. Containers may explode when heated. Environmentally hazardous. In the event of fire, cool tanks with water spray. Runoff may create fire or explosion hazard. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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**Hazardous combustion products** Oxides of carbon.

**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** 3Y

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

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

**For emergency responders** Shut off ignition sources. Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

**Environmental precautions**

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

**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. A vapor suppressing foam may be used to reduce vapors. 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** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.

**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.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Protect from direct sunlight. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

**Incompatible materials** Oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

**Exposure Limits** No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority.

**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.

**Hand protection** Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Antistatic boots. Overalls.

**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** Colourless to Pale Brown  
**Odor** Distinctive Lemon  
**Odor threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	59 °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	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	0.830 - 0.850 @ 20°C	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	Immiscible in water	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<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**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. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding.

Conditions to avoid

**Conditions to avoid** Heat, flames and sparks. Static discharge (electrostatic discharge). Avoid contact with combustible substances. Direct sunlight.

Incompatible materials

**Incompatible materials** Oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Oxides of carbon.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Information on likely routes of exposure

<b>Product Information</b>	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:
<b>Inhalation</b>	May cause irritation.
<b>Eye contact</b>	Causes serious eye damage.
<b>Skin contact</b>	Causes skin irritation. May cause sensitization by skin contact.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May cause gastrointestinal discomfort if consumed in large amounts.
<b>Symptoms</b>	Irritation. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives.

### Acute toxicity

#### **Numerical measures of toxicity**

No information available

See section 16 for terms and abbreviations

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

<b>Skin corrosion/irritation</b>	Causes skin irritation. Classification is based on mixture calculation methods based on component data.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage. Classification is based on mixture calculation methods based on component data.
<b>Respiratory or skin sensitization</b>	May cause sensitization by skin contact. Classification is based on mixture calculation methods based on component data.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure. Classification is based on mixture calculation methods based on component data.
<b>Aspiration hazard</b>	No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Very toxic to aquatic life with long lasting effects. Keep out of waterways.

**Terrestrial ecotoxicity** There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
d-Limonene	-	LC50: 0.619 - 0.796mg/L (96h, Pimephales promelas) LC50: =35mg/L (96h, Oncorhynchus mykiss)	LC50 Daphnia magna (Water flea) 0.577 mg/L/48 hr (1)
Citral	EC50: =16mg/L (72h, Desmodesmus subspicatus) EC50: =19mg/L (96h, Desmodesmus subspicatus)	LC50: 4.6 - 10mg/L (96h, Leuciscus idus)	EC50: =7mg/L (48h, Daphnia magna)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

### Component Information

Chemical name	Partition coefficient
d-Limonene	4.23
Citral	2.76

### Other adverse effects

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### **Waste from residues/unused products**

Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 2, 3 and 4 chemicals - may not be disposed of into or onto a landfill or sewage facility. They may only be burnt in certain situations. Class 2.1.1, 3.1 and 4.1.1 chemicals may only be discharged into the environment as waste if the substance will not at any time come into contact with class 1 or class 5 substances; and there will be no ignition source in the vicinity of the disposal site at any time and if the substance were to ignite, no person, or place where a person may legally be, would be exposed to an unsafe level of heat radiation.

#### **Contaminated packaging**

For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the



chemical that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

## 14. TRANSPORT INFORMATION

**ROAD AND RAIL TRANSPORT** Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number 1197  
 Proper shipping name EXTRACTS, FLAVOURING, LIQUID  
 Hazard class 3  
 Packing group III  
 Special Provisions 223  
 Hazchem code 3Y

**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 1197  
 UN proper shipping name EXTRACTS, FLAVOURING, LIQUID  
 Transport hazard class(es) 3  
 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 1197  
 UN proper shipping name EXTRACTS, FLAVOURING, LIQUID  
 Transport hazard class(es) 3  
 Packing group III  
 IMDG EMS Fire F-E  
 IMDG EMS Spill S-D

## 15. REGULATORY INFORMATION

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

#### New Zealand

**National regulations** See section 8 for national exposure control parameters

#### International Inventories

**NZIoC** All the hazardous constituents of this material are listed on the New Zealand Inventory of Chemicals.  
**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AIIC** Contact supplier for inventory compliance status.

**Legend:****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**AIC**- 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****Prepared By** This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).**Issuing Date:** 11-Oct-2023**Reason(s) For Issue:** 5 Yearly Revised Primary SDS**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**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

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 and Australian Botanical Products.**

**End of Safety Data Sheet**