

# SAFETY DATA SHEET



Revision date: 18-Feb-2021

Revision Number 1

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** ORANGE TERPENE

**Product Code(s)** 000000053973

### Other means of identification

**UN number** 2319

**CAS No.** 68647-72-3

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

**Recommended use** Food flavour.

**Uses advised against** No information available.

### Supplier

Ixom Operations Pty Ltd  
ABN: 51 600 546 512  
Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

Telephone Number: +61 3 9906 3000

### 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).

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

<b>Flammable liquids</b>	Category 3
<b>Aspiration hazard</b>	Category 1
<b>Skin corrosion/irritation</b>	Category 2
<b>Skin sensitization</b>	Category 1
<b>Acute aquatic toxicity</b>	Category 2
<b>Chronic aquatic toxicity</b>	Category 2

### SIGNAL WORD

Danger

**Label elements**

Flame  
Health hazard  
Exclamation mark  
Environment



**Hazard statements**

H226 - Flammable liquid and vapor  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction

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**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves / protective clothing / eye protection / face protection  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Use explosion-proof electrical, ventilating, lighting equipment  
Contaminated work clothing should not be allowed out of the workplace  
In case of inadequate ventilation wear respiratory protection  
Avoid release to the environment

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)  
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 INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Do NOT induce vomiting  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam 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) 5

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Weight-%
Terpenes and terpenoids, orange oil	68647-72-3	100

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Emergency telephone number</b>	Poisons Information Center, Australia: 13 11 26 Poisons Information Center, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air.
<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. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Ingestion</b>	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.
<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. Avoid contact with skin, eyes, and clothing.

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

**Symptoms** Irritation. Redness. May cause allergic skin reaction.

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

**Note to physicians** Treat symptomatically. May cause sensitization by skin contact. Delayed pulmonary edema may occur.

#### 5. FIRE FIGHTING MEASURES

##### Suitable Extinguishing Media

**Suitable Extinguishing Media** Alcohol resistant foam is the preferred firefighting medium but, if it is not available, fine water spray or water fog can be used.

**Unsuitable extinguishing media** High volume water jet.

##### Specific hazards arising from the chemical

**Specific hazards arising from the chemical** Flammable. Risk of ignition. Vapors may form explosive mixture with air. Keep product and empty container away from heat and sources of ignition. 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.

**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** 3Y

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. 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. 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. Keep out of waterways. 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** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Use non-sparking tools.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. 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. Do not eat, drink or smoke when using this product. Use personal protection equipment.

**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. Keep at temperatures between -10 °C and 27 °C. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Store away from foodstuffs. Keep in properly labelled containers. Keep in an area equipped with sprinklers. Keep container closed when not in use.

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

**Incompatible materials** Oxidizing agents. Mineral acids. Acidic clays.

**Poisons Schedule (SUSMP)** 5

## 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, SAFETY GLASSES, GLOVES.



**Eye/face protection** Glasses.

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

**Hand protection** 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** No information available.  
**Color** Slightly Yellow  
**Odor** Strong Citrus  
**Odor threshold** No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known

<b>Melting point / freezing point</b>	-74°C to -96.9°C	
<b>Boiling point / boiling range</b>	175.5-178°C	
<b>Flash point</b>	45-49°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>	6.1% @262°C	
<b>Lower flammability or explosive limits</b>	0.7% @150°C	
<b>Vapor pressure</b>	1.4 mmHg @20°C	
<b>Vapor density</b>	0.012 @20°C (air=1)	
<b>Relative density</b>	0.838-0.850 @20°C	
<b>Water solubility</b>	Partially miscible	
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	237°C	
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	1.17 mm <sup>2</sup> /s @20°C	None known
<b>Dynamic viscosity</b>	0.99 mPa.s @20°C	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

**Reactivity** Reacts with strong oxidising agents.

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** Vapours can form an explosive mixture with air.

Conditions to avoid

**Conditions to avoid** Heat, flames and sparks.

Incompatible materials

**Incompatible materials** Oxidizing agents. Mineral acids. Acidic clays.

Hazardous decomposition products

**Hazardous decomposition products** Carbon oxides.

**11. TOXICOLOGICAL INFORMATION**Acute toxicityInformation 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. Aspiration into lungs can produce severe lung damage.
<b>Eye contact</b>	May cause irritation.
<b>Skin contact</b>	Irritating to skin. May cause sensitization by skin contact.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration may cause pulmonary edema and pneumonitis.
<b>Symptoms</b>	Irritation. Redness. May cause allergic skin reaction.

#### Numerical measures of toxicity - Product Information

##### On basis of test data

Oral LD50 > 5000 mg/kg (rat)  
 Dermal LD50 > 5000 mg/kg (rabbit)

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>	Irritating to skin.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitization</b>	May cause sensitization by skin contact.
<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>	No information available.
<b>Aspiration hazard</b>	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
Terpenes and terpenoids, orange oil	-	96hr LC50 = 5.65 mg/L (Danio rerio)	-	48hr EC50 = 1.1 mg/L (Daphnia magna)

### Persistence and degradability

**Persistence and degradability** Readily biodegradable.

#### Bioaccumulative potential

**Bioaccumulation** This chemical shows a high bioaccumulation potential. Log Kow = 2.78-4.88.

#### 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. Do not reuse empty 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** 2319  
**Proper shipping name** TERPENE HYDROCARBONS, N.O.S. (ORANGE OIL)  
**Hazard class** 3  
**Packing group** III  
**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** 2319  
**UN proper shipping name** TERPENE HYDROCARBONS, N.O.S. (ORANGE OIL)  
**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** 2319  
**UN proper shipping name** TERPENE HYDROCARBONS, N.O.S. (ORANGE OIL)  
**Transport hazard class(es)** 3  
**Packing group** III  
**IMDG EMS Fire** F-E  
**IMDG EMS Spill** S-D  
**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).

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)** 5

#### **Major hazard (accident/incident planning) regulation**

Verify that license requirements are met

##### Hazardous chemical

Liquids that meet the criteria for Class 3 Packing Group II or III

##### Threshold quantity (T)

50 000

#### International Inventories

##### **AICS**

This material is 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

Supplier Safety Data Sheet 04/ 2016

**Reason(s) For Issue:** First Issue Primary SDS

**Issuing Date:** 18-Feb-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		

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**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 Ixom 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.**

**End of Safety Data Sheet**