

SAFETY DATA SHEET



Revision date: 26-Sep-2024

Revision Number 5

Section 1: Identification

Product identifier

Product Name ORANGE OIL

Product Code(s) 000000033100

Other means of identification

UN number or ID number 2319

CAS No. 8028-48-6

Synonyms Oil Orange 10:1; Oil of Orange Valencia 5-Fold; Oil Orange Valencia 5-Fold; Oil Orange Valencia 5-Fold (Specially Dewaxed); C.P. Orange Oil; Aldehyde Orange Oil Phase; Orange Essence Oil (Brazil); AAALD18800; AAOIL53101; Australian Orange Oil (FAORA44552); Twenty Two Fold Orange Oil; Orange Oil Concentrate 22X; AFORA00022; Oil of Orange; Orange Oil; Oil of Orange Brazilian; Orange Oil Sweet; AAOIL00585; AAOIL00590; Orange Oil Terpeneless; AAOIL00588

Pure substance/mixture Substance

Recommended use of the chemical and restrictions on use

Recommended use Essential oil. Therapeutic active, fragrance and flavour applications.

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.

GHS Classification

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

Label elements

Flame
Exclamation mark
Health hazard
Environment



Signal word

DANGER

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
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.
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.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin 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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Do NOT induce vomiting.
In case of fire: Use CO2, dry chemical, or foam to extinguish.
Collect spillage.

Precautionary Statements - Storage

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

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-%
Orange, sweet, extract	8028-48-6	100

Section 4: First aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

Inhalation

Aspiration into lungs can produce severe lung damage. If breathing is irregular or stopped, administer artificial respiration. Get immediate medical attention. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Delayed pulmonary edema may occur.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.

Ingestion

ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed**Symptoms**

Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Effects of Exposure

No information available.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

May cause sensitization by skin contact. Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances. Delayed pulmonary edema may occur.

Section 5: Firefighting measures**Suitable Extinguishing Media****Suitable extinguishing media**

Foam. Dry chemical or CO₂.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Flammable. Risk of ignition. Keep product and empty container away from heat and sources of ignition. Containers may explode when heated. In the event of fire, cool tanks with water spray. Runoff may create fire or explosion hazard. Product is or contains a sensitizer. May cause sensitization by skin contact. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Environmentally hazardous.

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 3Y

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or 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.

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. Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. 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. Remove ignition sources. Provide adequate ventilation.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Use non-sparking tools.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid contact with skin, eyes or 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. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. 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 an area equipped with sprinklers. Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children. Store away from other materials. Keep container closed when not in use.

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.

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. 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.

Thermal hazards No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance No information available
Color Colourless to Yellow - Light brown to Deep Orange - Red
Odor Citrus
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	-70 - -90 °C	None known
Boiling point / boiling range	175 - 185 °C	None known
Flash point	45 - 54 °C	CC (closed cup)
Evaporation rate	5.8	approx, (diethyl ether = 1)
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	6.1	
Lower flammability or explosive limits	0.7	
Vapor pressure	2 mmHg	@ 25 °C, approx.
Vapor density	4.7	approx.
Relative density	0.835 - 0.895	@ 20 °C
Water solubility	0.0138	g/L @ 25 °C, approx.
Solubility(ies)	Immiscible in water	None known
Partition coefficient	4.23	approx.
Autoignition temperature	237 - 260 °C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

VOC Content (%) approx. >92

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 Heating can cause expansion or decomposition of the material, which can lead to the

containers exploding. Peroxides formed by oxidation may present an explosion hazard if they become highly concentrated through distillation.

Conditions to avoid

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

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 Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye contact May cause irritation.

Skin contact May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Repeated exposure may cause skin dryness or cracking. Causes skin irritation.

Ingestion Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms Itching. Rashes. Hives. Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Redness. May cause redness and tearing of the eyes.

Acute toxicity**Numerical measures of toxicity - Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Orange, sweet, extract	-	> 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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

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	May be fatal if swallowed and enters airways.

Section 12: Ecological information

Ecotoxicity

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

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability

Persistence and degradability Partially biodegradable. (1).

Bioaccumulative potential

Bioaccumulation This product shows a high bioaccumulation potential. (1).

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.

UN number or ID number 2319
Proper shipping name TERPENE HYDROCARBONS, N.O.S. (ORANGE, SWEET, EXTRACT)
Transport hazard class(es) 3
Packing group III
Environmental hazard Yes
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, SWEET, EXTRACT)
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, SWEET, EXTRACT)
Transport hazard class(es) 3
Packing group III
IMDG EMS Fire F-E
IMDG EMS Spill S-D
Marine pollutant P

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.

See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

No poisons schedule number allocated

Poison Schedule Number Not applicable

Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Orange, sweet, extract - 8028-48-6	Present	-

Illicit Drug Precursors/Reagents

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

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

50 000

International Inventories

AIIC	This material is listed on the Australian Inventory of Industrial Chemicals.
NZIoC	This material is listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	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.

Legend:

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

(1) Supplier Safety Data Sheet; 01/ 2023

Reason(s) For Issue: 5 Yearly Revised Primary SDS

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

Revision date: 26-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