



SAFETY DATA SHEET ORANGE OIL

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	ORANGE OIL
Product number	45814
REACH registration number	01-2119493353-35-XXXX
CAS number	80006-57-9
EC number	232-433-8

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Flavouring Fragrance Biocide Solvent. Chemical Intermediate
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1.3. Details of the supplier of the safety data sheet

Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 sds@univar.com +44 1274 267306
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1.4. Emergency telephone number

Emergency Contact Number (Office Hours)	+44 1274 267346
Emergency Contact Number (Outside Office Hours)	+441865 407333
Sds No.	45814

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Skin Irrit. 2 - H315 Skin Sens. 1 - H317
Environmental hazards	Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC) Xn; R65. Xi; R38. N; R50/53. R10, R43

2.2. Label elements

EC number	232-433-8
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ORANGE OIL

Pictogram



Signal word

Warning

Hazard statements

H410 Very toxic to aquatic life with long lasting effects.
 H317 May cause an allergic skin reaction.
 H315 Causes skin irritation.
 H226 Flammable liquid and vapour.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P261 Avoid breathing vapour/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with national regulations.

Contains

D-LIMONENE

2.3. Other hazards

Risk of chemical pneumonia after aspiration. This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

D-LIMONENE	60-100%
CAS number: 5989-27-5	EC number: 227-813-5
M factor (Chronic) = 1	

Classification

Flam. Liq. 3 - H226
 Skin Irrit. 2 - H315
 Skin Sens. 1 - H317
 Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC)

Xi; R38. N; R50/53. R10, R43

β-MYRCENE

1-5%

CAS number: 123-35-3

EC number: 204-622-5

Classification

Flam. Liq. 3 - H226
 Skin Irrit. 2 - H315
 Eye Irrit. 2 - H319
 STOT SE 3 - H335

Classification (67/548/EEC or 1999/45/EC)

Xn; R65. Xi; R36/37/38. R10

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

ORANGE OIL

Inhalation	General first aid, rest, warmth and fresh air. Get medical attention if any discomfort continues.
Ingestion	Immediately rinse mouth and drink plenty of water (200-300 ml). Do not induce vomiting. Never give anything by mouth to an unconscious person. When risk of unconsciousness, place and transport the victim in secured side position. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention.
Eye contact	Rinse immediately with plenty of water. Hold eyelids apart. Continue to rinse for at least 15 minutes. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	May cause respiratory system irritation. In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects.
Ingestion	May cause stomach pain or vomiting. Diarrhoea. Burning sensation in mouth. May cause nausea, headache, dizziness and intoxication. Difficulty in breathing. Coughing. Cyanosis (blue tissue condition - nails, lips and/or skin).
Skin contact	Irritating to skin. May cause an allergic skin reaction.
Eye contact	May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
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5.3. Advice for firefighters

Protective actions during firefighting	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Avoid the spillage or runoff entering drains, sewers or watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Provide adequate ventilation. Avoid heat, flames and other sources of ignition. Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Wear protective clothing as described in Section 8 of this safety data sheet.
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6.2. Environmental precautions

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Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with sand or other inert absorbent. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. No smoking, sparks, flames or other sources of ignition near spillage. Use non sparking handtools and explosion-proof electric equipment.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Provide adequate ventilation. Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Do not eat, drink or smoke when using the product. Avoid contact with oxidising agents. Avoid spilling.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store at moderate temperatures in dry, well ventilated area. Avoid contact with oxidising agents.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

DNEL

Workers - Dermal; Short term	: 0.222 mg/cm ²
Workers - Inhalation; Long term	: 33.3 mg/m ³
General population - Dermal; Short term	: 0.111 mg/cm ²
General population - Inhalation; Long term	: 8.33 mg/m ³
General population - Oral; Long term	: 4.76 mg/kg/day

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Use explosion-proof electrical, ventilating and lighting equipment.

Eye/face protection

Wear chemical splash goggles. Tight-fitting safety glasses. EN 166

Hand protection

Wear protective gloves. EN 374 e.g. Rubber, neoprene or PVC. Butyl rubber. Nitrile rubber.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Take off contaminated clothing and wash it before reuse. Wash hands after handling.

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Respiratory protection If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellow.
Odour	Citrus. Orange.
Odour threshold	No information available.
pH	No information available.
Melting point	-74°C
Initial boiling point and range	175.5 - 176.5°C @
Flash point	48 - 51°C
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.7 % Upper flammable/explosive limit: 6.1 %
Vapour pressure	0.9 mm Hg @ 20°C
Vapour density	4.7
Relative density	0.84
Solubility(ies)	0.0013 g/100ml water @ 25°C Soluble in the following materials: Organic solvents.
Partition coefficient	log Kow: 5.3
Auto-ignition temperature	245°C
Decomposition Temperature	Not applicable.
Viscosity	0.85 cP @ 25°C
Explosive properties	Vapours may form explosive mixtures with air.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Keep away from open flames, hot surfaces and sources of ignition The following materials may react with the product: Oxidising materials.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Keep away from open flames, hot surfaces and sources of ignition Avoid contact with oxidising agents.

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10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >5000 mg/kg, Dermal, Rabbit

Skin corrosion/irritation

Animal data Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating.

Respiratory sensitisation

Respiratory sensitisation No specific test data are available.

Skin sensitisation

Skin sensitisation Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure No specific test data are available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. May cause damage to organs (Blood system, Liver, Kidneys) through prolonged or repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met. May be harmful if swallowed and enters airways.

Inhalation

May cause respiratory system irritation. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea.

Ingestion

May cause stomach pain or vomiting. Diarrhoea. Burning sensation in mouth. May cause nausea, headache, dizziness and intoxication. Difficulty in breathing. Coughing. Cyanosis (blue tissue condition - nails, lips and/or skin).

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Skin contact Irritating to skin. May cause an allergic skin reaction.

Eye contact May cause eye irritation.

SECTION 12: Ecological Information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Very toxic to aquatic life with long lasting effects.

Acute toxicity - fish LC₅₀, 96 hours: 0.720 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 0.924 mg/l, Daphnia magna

Acute toxicity - microorganisms EC₅₀, 3 hours: 209 mg/l, Activated sludge

Ecological information on ingredients.

D-LIMONENE

Chronic aquatic toxicity

M factor (Chronic) 1

12.2. Persistence and degradability

Stability (hydrolysis) Hydrolysis in water

12.3. Bioaccumulative potential

Bioaccumulative potential Hydrolysis in water

Partition coefficient log Kow: 5.3

12.4. Mobility in soil

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID) 2319

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UN No. (IMDG) 2319

UN No. (ICAO) 2319

UN No. (ADN) 2319

14.2. UN proper shipping name

Proper shipping name (ADR/RID) TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)

Proper shipping name (IMDG) TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)

Proper shipping name (ICAO) TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)

Proper shipping name (ADN) TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID classification code F1

ADR/RID label 3

IMDG class 3

ICAO class/division 3

ADN class 3

Transport labels



14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ADN packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-E, S-D

ADR transport category 3

Emergency Action Code 3Y

Hazard Identification Number (ADR/RID) 30

Tunnel restriction code (D/E)

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14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

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

Not relevant.

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Guidance	CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	This is first issue.
Revision date	22/06/2015
Revision	01
SDS number	45814
SDS status	Approved.
Signature	M Dryden
Risk phrases in full	R10 Flammable. R36/37/38 Irritating to eyes, respiratory system and skin. R38 Irritating to skin. R43 May cause sensitisation by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R65 Harmful: may cause lung damage if swallowed.
Hazard statements in full	H226 Flammable liquid and vapour. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H410 Very toxic to aquatic life with long lasting effects.

TURKISH SIGNATURE