

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

1.1. Product identifier

Product form	: Substance
Substance name	: Mandarin Essential Oil
Chemical name	: Citrus Nobilis Peel Extract
EC Index-No.	: 284-521-0
EC-No.	: 284-521-0
CAS-No.	: 8008-31-9 / 84929-38-4
REACH registration No	: 01-2120074120
Product code	: 154
Synonyms	: Clementine mandarin oil terpenes, Citrus nobilis fruit extract, Citrus nobilis peel oil, Citrus clementina oil
Other means of identification	: Citrus nobilis peel extract is natural and obtained by cold pressing of fruit peel from Citrus clementina

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

1.2.1. Relevant identified uses

Main use category : Consumer use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Naissance
Unit 9 & 11 Milland Road Industrial Estate
Milland Road
SA11 1NJ Neath - United Kingdom
www.naissance.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 2	H315
Skin sensitisation, Category 1	H317
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

	GHS02	GHS07	GHS08	GHS09
Signal word (CLP)	: Danger			
Hazard statements (CLP)	: H226 - _H_226_EU. H304 - _H_304_EU. H315 - _H_315_EU. H317 - _H_317_EU. H411 - _H_411_EU.			
Precautionary statements (CLP)	: P210 - _P_210_2_EU. P233 - _P_233_EU. P240 - _P_240_2_EU. P261 - _P_261_EU _P261_INHAL_CONDITION_VAPOURS_EU, _P261_INHAL_CONDITION_SPRAY_EU, _P261_INHAL_CONDITION_MIST_EU. P264 - _P_264_EU hands, forearms and face. P272 - _P_272_EU. P273 - _P_273_EU. P280 - Wear _P280_PROTECTION_EQUIPMENT_PROT_CLOTHING_EYE_FACE_PROTECTION_EU. P301+P310 - _P_301-310_2_EU a doctor, a POISON CENTER. P302+P352 - _P_302-352_2_EU soap and water. P303+P361+P353 - _P_303-361-353_3_EU or shower. P331 - _P_331_EU. P332+P313 - _P_332-313_EU. P333+P313 - _P_333-313_EU. P362+P364 - _P_362-364_EU. P391 - _P_391_EU. P403+P235 - _P_403-235_EU. P405 - _P_405_EU. P501 - _P_501_EU contents and container hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.			

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	: Mandarin Essential Oil
CAS-No.	: 8008-31-9 / 84929-38-4
EC-No.	: 284-521-0
EC Index-No.	: 284-521-0

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Limonene	(CAS-No.) 5989-27-5 (EC-No.) 227-813-5	90 – 96	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
L-Beta-Pinene	(CAS-No.) 18172-67-3 (EC-No.) 242-060-2	0.1 – 3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
y-Terpinene	(CAS-No.) 99-85-4	0.1 – 2	Flam. Liq. 3, H226 Asp. Tox. 1, H304

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Alpha-Pinene	(CAS-No.) 80-56-8 / 7785-26-4 (EC-No.) 201-291-9	0.3 – 0.8	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
--------------	-----------------------------------------------------	-----------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Precautionary measures fire	: Evacuate area. Eliminate all ignition sources if safe to do so. Stop leak if safe to do so.
Firefighting instructions	: Cool laterally with water containers exposed to flames, even after the fire is extinguished. Eliminate all ignition sources if safe to do so. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Remove ignition sources. Evacuate area.
------------------	-----------------------------------------------------------------------

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Alpha-Pinene (80-56-8 / 7785-26-4)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	20 ppm

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Mobile liquid.
Colour	: Characteristic. Orange to orange red.
Odour	: characteristic. Characteristic of the outer part of fresh mandarin peel.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: > 101 325 Pa: 160°C +/- 20°C
Flash point	: 51 °C (Pensky Martens Closed Cup method)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Vapour pressure	: 208.7 Pa @ 25°C
Relative vapour density at 20 °C	: No data available
Relative density	: 0.84 – 0.855 at 20°C
Solubility	: Water: 2.6 – 93.066 mg/l at 25°C Ethanol: solubl ein alcohol
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Refractive index : 1.468 – 1.478

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Mandarin Essential Oil (8008-31-9 / 84929-38-4)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

Limonene (5989-27-5)

LD50 oral rat	4400 mg/kg
LD50 dermal	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 20 mg/l

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Alpha-Pinene (80-56-8 / 7785-26-4)	
LD50 oral rat	3700 mg/kg

L-Beta-Pinene (18172-67-3)	
LD50 oral rat	4800 mg/kg
LD50 dermal	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 20 mg/l

Skin corrosion/irritation	: _H_315_EU.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: _H_317_EU.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: _H_304_EU.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects. Before neutralisation, the product may represent a danger to aquatic organisms. Very toxic to aquatic life.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: _H_411_EU.

Mandarin Essential Oil (8008-31-9 / 84929-38-4)	
LC50 - Fish [1]	> 100 mg/l
EC50 - Daphnia [1]	8.9 mg/l
EC50 72h - Algae [1]	≈ 9.7 mg/l

Limonene (5989-27-5)	
LC50 - Fish [1]	≈ 33 mg/l
EC50 - Daphnia [1]	0.1 – 1 mg/l
ErC50 algae	0.1 – 1 mg/l

L-Beta-Pinene (18172-67-3)	
LC50 - Fish [1]	0.56 mg/l
EC50 - Daphnia [1]	1.2 mg/l
EC50 72h - Algae [1]	0.7 mg/l

12.2. Persistence and degradability

Limonene (5989-27-5)	
Persistence and degradability	Not established. May cause long-term adverse effects in the environment.

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Alpha-Pinene (80-56-8 / 7785-26-4)	
Persistence and degradability	Not established. May cause long-term adverse effects in the environment.

L-Beta-Pinene (18172-67-3)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Limonene (5989-27-5)	
Bioaccumulative potential	Not established.

Alpha-Pinene (80-56-8 / 7785-26-4)	
Bioaccumulative potential	Not established.

L-Beta-Pinene (18172-67-3)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1169	UN 1169	UN 1169	UN 1169	UN 1169
14.2. UN proper shipping name				
EXTRACTS, AROMATIC, LIQUID	EXTRACTS, AROMATIC, LIQUID	Extracts, aromatic, liquid	EXTRACTS, AROMATIC, LIQUID	EXTRACTS, AROMATIC, LIQUID
Transport document description				
UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1169 Extracts, aromatic, liquid, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, ENVIRONMENTALLY HAZARDOUS

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.3. Transport hazard class(es)				
3	3	3	3	3
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: 3YE

Transport by sea

Special provisions (IMDG)	: 223, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Usually consist of alcoholic solutions. Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Special provisions (IATA)	: A3
ERG code (IATA)	: 3L
Inland waterway transport	
Classification code (ADN)	: F1
Special provisions (ADN)	: 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0
Rail transport	
Classification code (RID)	: F1
Special provisions (RID)	: 601
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T2
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE4
Hazard identification number (RID)	: 30

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Mandarin Essential Oil is not on the REACH Candidate List

Mandarin Essential Oil is not on the REACH Annex XIV List

Mandarin Essential Oil is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Mandarin Essential Oil is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 3	Flammable liquids, Category 3

Mandarin Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H226	_H_226_EU
H302	_H_302_EU
H304	_H_304_EU
H315	_H_315_EU
H317	_H_317_EU
H400	_H_400_EU
H410	_H_410_EU
H411	_H_411_EU

The classification complies with : ATP 8

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.