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Safety Data Sheet
Organic Neroli Essential Oil
(Citrus aurantium var. amara)

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SAFETY DATA SHEET (REGULATION (EC) n° 1907/2006 - REACH
Version : N°1

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: BITTER ORANGE BLOSSOM ORGANIC ESSENTIAL OIL
Botanic Name: Citrus × aurantium subsp. amara Engl. Syn. : Citrus × aurantium L. INCI Name: CITRUS AURANTIUM AMARA (BITTER ORANGE) FLOWER OIL N° CAS: 8016-38-4
N° EINECS: 277-143-2
N° FEMA: 2771
N° FDA: 182.20
N° CoE: 136
N° REACH: Unregistered substance as a result of tonnage
Product code : EOB158V.
UFI : X8GD-6VXN-620C-QXFT

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

Food, cosmetic and fragrance

1.3. Details of the supplier of the safety data sheet

Registered company name :
NHR Organic Oils Ltd
24 Chatham Place Brighton BN1 3TN UK
Telephone : +44 01273 746505
Email: info@nhrorganicoils.com

1.4. Emergency telephone number : +44 01273 746505

Association/Organisation : INRS / ORFILA http://www.centres-antipoison.net.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin irritation, Category 2 (Skin Irrit. 2, H315). Eye irritation, Category 2 (Eye Irrit. 2, H319). Skin sensitisation, Category 1 (Skin Sens. 1, H317). Aspiration hazard, Category 1 (Asp. Tox. 1, H304). Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400). Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

This substance does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

Flavouring substance for industrial use.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :


GHS07


GHS08


GHS09

Signal Word :

DANGER

Product identifiers :

603-235-00-2	LINALOOL
601-096-00-2	(R)-P-MENTHA-1,8-DIENE
EC 204-872-5	BETA-PINENE
EC 204-116-4	LINALYL ACETATE
603-241-00-5	GERANIOL
EC 255-053-4	TRANS-NEROLIDOL
EC 203-341-5	GERANYL ACETATE
CAS 106-28-5	TRANS-TRANS-FARNESOL
EC 203-378-7	NEROL
EC 205-459-2	NERYL ACETATE
EC 201-746-1	BETA-CARYOPHYLLENE
EC 201-291-9	ALPHA-PINENE
EC 209-578-0	TERPINOLENE
601-095-00-7	P-MENTHA-1,3-DIENE

Hazard statements :

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements - Prevention :

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...

Precautionary statements - Response :

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

The substance does not fulfil the PBT or vPvP criteria in accordance with annexe XIII of the REACH regulations EC 1907/2006.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Composition :

Identification	(EC) 1272/2008	Note	%
INDEX: 603-235-00-2 CAS: 78-70-6 EC: 201-134-4 LINALOOL	GHS07 Wng Skin Sens. 1B, H317		25 <= x % < 50
INDEX: 601-096-00-2 CAS: 5989-27-5 EC: 227-813-5 (R)-P-MENTHA-1,8-DIENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 Aquatic Acute 1, H400 M Acute = 1	[1]	10 <= x % < 25
INDEX: I127_91_3 CAS: 127-91-3 EC: 204-872-5 BETA-PINENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[1]	10 <= x % < 25
INDEX: I115_95_7 CAS: 115-95-7 EC: 204-116-4 LINALYL ACETATE	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319		2.5 <= x % < 10
INDEX: I3779_61_1 CAS: 3779-61-1 EC: 223-241-5 TRANS BETA-OCIMENE, (E)-			2.5 <= x % < 10
INDEX: I98_55_5 CAS: 98-55-5 EC: 202-680-6 ALPHA-TERPINEOL	GHS07 Wng Skin Irrit. 2, H315 Eye Irrit. 2, H319		2.5 <= x % < 10
INDEX: 603-241-00-5 CAS: 106-24-1 EC: 203-377-1 GERANIOL	GHS07 Wng Skin Sens. 1, H317		2.5 <= x % < 10

INDEX: I40716_66_3 CAS: 40716-66-3 EC: 255-053-4 TRANS-NEROLIDOL	GHS07, GHS09 Wng Skin Sens. 1B, H317 Eye Irrit. 2, H319 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		2.5 <= x % < 10
INDEX: I105_873AB CAS: 105-87-3 EC: 203-341-5 GERANYL ACETATE	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411		2.5 <= x % < 10
INDEX: I123_35_3 CAS: 123-35-3 EC: 204-622-5 MYRCENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411 Aquatic Acute 1, H400 M Acute = 1		0 <= x % < 2.5
INDEX: I106_28_5 CAS: 106-28-5 TRANS-TRANS-FARNESOL	 Wng Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317		0 <= x % < 2.5
INDEX: I106_25_2 CAS: 106-25-2 EC: 203-378-7 NEROL	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319		0 <= x % < 2.5
INDEX: 01.059 CAS: 3387-41-5 EC: 222-212-4 4(10)-THUJENE4-METHYLENE-1-ISOPROPY L- BICYCLO[3.1.0]HEXANE			0 <= x % < 2.5
INDEX: I3338_55_4 CAS: 3338-55-4 EC: 222-081-3 CIS-BETA-OCIMENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Aquatic Chronic 2, H411 Aquatic Acute 1, H400 M Acute = 1		0 <= x % < 2.5
INDEX: I141_12_8 CAS: 141-12-8 EC: 205-459-2 NERYL ACETATE	GHS07 Wng Skin Sens. 1B, H317		0 <= x % < 2.5
INDEX: I87_44_5 CAS: 87-44-5 EC: 201-746-1 BETA-CARYOPHYLLENE	GHS07, GHS08 Dgr Asp. Tox. 1, H304 Skin Sens. 1B, H317 Aquatic Chronic 4, H413		0 <= x % < 2.5

INDEX: I80_56_8 CAS: 80-56-8 EC: 201-291-9 ALPHA-PINENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[1]	0 <= x % < 2.5
INDEX: I586_62_9 CAS: 586-62-9 EC: 209-578-0 TERPINOLENE	GHS07, GHS08, GHS09 Dgr Asp. Tox. 1, H304 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0 <= x % < 2.5
INDEX: I134_20_3 CAS: 134-20-3 EC: 205-132-4 METHYL ANTHRANILATE	GHS07 Wng Eye Irrit. 2, H319		0 <= x % < 2.5
INDEX: I562_74_3 CAS: 562-74-3 EC: 209-235-5 TERPINEN-4-OL	GHS07 Wng Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H336		0 <= x % < 2.5
INDEX: I555_10_2 CAS: 555-10-2 EC: 209-081-9 BETA-PHELLANDRENE	GHS02, GHS08 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304		0 <= x % < 2.5
INDEX: I99_85_4 CAS: 99-85-4 EC: 202-794-6 P-MENTHA-1,4-DIENE	GHS02, GHS08 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Repr. 2, H361	[2]	0 <= x % < 2.5
INDEX: I120_72_9 CAS: 120-72-9 EC: 204-420-7 INDOLE	GHS05, GHS06 Dgr Acute Tox. 4, H302 Acute Tox. 3, H311 Eye Dam. 1, H318		0 <= x % < 2.5
INDEX: I103_45_7 CAS: 103-45-7 EC: 203-113-5 PHENETHYL ACETATE	GHS05 Dgr Eye Dam. 1, H318		0 <= x % < 2.5

INDEX: 601-095-00-7 CAS: 99-86-5 EC: 202-795-1 P-MENTHA-1,3-DIENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411		0 <= x % < 2.5
INDEX: 13.096 CAS: 5989-33-3 EC: 227-814-0 5(2-HYDROXYISOPROPYL)- 2-METHYL-2-VINYLTETRAHY- DROFURAN			0 <= x % < 2.5
INDEX: I80_26_2 CAS: 80-26-2 EC: 201-265-7 ALPHA-TERPINEOL ACETATE			0 <= x % < 2.5
INDEX: 605-019-00-3 CAS: 5392-40-5 EC: 226-394-6 CITRAL	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317	[1]	0 <= x % < 2.5
INDEX: 01.043 CAS: 6753-98-6 EC: 229-816-7 3,7,10-HUMULATRIENE			0 <= x % < 2.5
INDEX: I76_49_3 CAS: 76-49-3 EC: 200-964-4 BORNYL ACETATE			0 <= x % < 2.5
INDEX: I470_82_6 CAS: 470-82-6 EC: 207-431-5 EUCALYPTOL	GHS02, GHS07 Wng Flam. Liq. 3, H226 Skin Sens. 1B, H317 Eye Irrit. 2, H319		0 <= x % < 2.5
INDEX: I140_29_4 CAS: 140-29-4 EC: 205-410-5 BENZYLNITRILE	GHS06 Dgr Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 1, H330		0 <= x % < 2.5
INDEX: I28973_97_9 CAS: 28973-97-9 CIS-BETA-FARNESENE			0 <= x % < 2.5
INDEX: I18794_84_8 CAS: 18794-84-8 EC: 242-582-0 BETA-FARNESENE	GHS08 Dgr Asp. Tox. 1, H304		0 <= x % < 2.5
INDEX: 01.042 CAS: 23986-74-5 GERMACRA-1(10),4(14),5- TRIENE			0 <= x % < 2.5

INDEX: I29548_30_9 CAS: 29548-30-9 EC: 249-689-1 FARNESYL ACETATE			0 <= x % < 2.5
INDEX: I99_83_2 CAS: 99-83-2 EC: 202-792-5 ALPHA-PHELLANDRENE	GHS02, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0 <= x % < 2.5
INDEX: I673_84_7 CAS: 673-84-7 EC: 211-614-5 2,6-DIMETHYLOCTA-2,4,6-TRIENE	GHS07, GHS08 Dgr Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319		0 <= x % < 2.5
INDEX: I4602_84_0 CAS: 4602-84-0 EC: 225-004-1 FARNESOL	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0 <= x % < 2.5
INDEX: I29350_73_0 CAS: 29350-73-0 EC: 249-580-9 CADINENE			0 <= x % < 2.5
INDEX: HEL0047 CAS: 39029-41-9 EC: / GAMMA CADINENE			0 <= x % < 2.5
INDEX: HEL0008 CAS: 15537-55-0 EC: 239-584-9 CIS THUYANOL-4			0 <= x % < 2.5
INDEX: I79_92_5 CAS: 79-92-5 EC: 201-234-8 CAMPHENE	GHS02, GHS07, GHS09 Wng 228 Eye Irrit. 2, H319 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0 <= x % < 2.5
INDEX: 601-094-00-1 CAS: 99-87-6 EC: 202-796-7 1-ISOPROPYL- 4-METHYLBENZENE	GHS02, GHS06, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Acute Tox. 3, H331 Asp. Tox. 1, H304 Aquatic Chronic 2, H411		0 <= x % < 2.5

INDEX: I34995_77_2 CAS: 34995-77-2 EC: 252-312-3 TRANS-LINALOOL OXIDE-3,6-OXIDE	GHS07 Wng Acute Tox. 4, H302 Eye Irrit. 2, H319		0 <= x % < 2.5
INDEX: I2867_05_2 CAS: 2867-05-2 EC: 220-686-7 5-ISOPROPYL-2-METHYLBICYCLO[3.1.0]HEX-2-ENE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411		0 <= x % < 2.5
INDEX: I13466_78_9 CAS: 13466-78-9 EC: 236-719-3 DELTA-3-CARENE	GHS02, GHS07, GHS08, GHS09 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Acute Tox. 4, H332 Aquatic Chronic 2, H411	[1]	0 <= x % < 2.5
INDEX: I106_22_9 CAS: 106-22-9 EC: 203-375-0 DL-CITRONELLOL	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319		0 <= x % < 2.5

Specific concentration limits:

Identification	Specific concentration limits	ATE
INDEX: I98_55_5 CAS: 98-55-5 EC: 202-680-6 ALPHA-TERPINEOL		oral: ATE = 4300 mg/kg BW
INDEX: I106_25_2 CAS: 106-25-2 EC: 203-378-7 NEROL		oral: ATE = 4500 mg/kg BW
INDEX: I3338_55_4 CAS: 3338-55-4 EC: 222-081-3 CIS-BETA-OCIMENE		oral: ATE = 5000 mg/kg BW
INDEX: I586_62_9 CAS: 586-62-9 EC: 209-578-0 TERPINOLENE		oral: ATE = 3775 mg/kg BW
INDEX: I134_20_3 CAS: 134-20-3 EC: 205-132-4 METHYL ANTHRANILATE		oral: ATE = 2780 mg/kg BW

INDEX: I562_74_3 CAS: 562-74-3 EC: 209-235-5 TERPINEN-4-OL		dermal: ATE = 2500 mg/kg BW oral: ATE = 1300 mg/kg BW
INDEX: I99_85_4 CAS: 99-85-4 EC: 202-794-6 P-MENTHA-1,4-DIENE		oral: ATE = 3850 mg/kg BW
INDEX: I120_72_9 CAS: 120-72-9 EC: 204-420-7 INDOLE		dermal: ATE = 790 mg/kg BW oral: ATE = 1000 mg/kg BW
INDEX: 601-095-00-7 CAS: 99-86-5 EC: 202-795-1 P-MENTHA-1,3-DIENE		oral: ATE = 1680 mg/kg BW
INDEX: I470_82_6 CAS: 470-82-6 EC: 207-431-5 EUCALYPTOL		oral: ATE = 2480 mg/kg BW
INDEX: I140_29_4 CAS: 140-29-4 EC: 205-410-5 BENZYLNITRILE		inhalation: ATE = 0.2 mg/l 4h (vapours) dermal: ATE = 270 mg/kg BW oral: ATE = 260 mg/kg BW
INDEX: I673_84_7 CAS: 673-84-7 EC: 211-614-5 2,6-DIMETHYLOCTA-2,4,6-TRIENE		dermal: ATE = 2400 mg/kg BW oral: ATE = 1900 mg/kg BW
INDEX: 601-094-00-1 CAS: 99-87-6 EC: 202-796-7 1-ISOPROPYL- 4-METHYLBENZENE		inhalation: ATE = 3 mg/l 4h (vapours)
INDEX: I34995_77_2 CAS: 34995-77-2 EC: 252-312-3 TRANS-LINALOOL OXIDE-3,6-OXIDE		dermal: ATE = 2500 mg/kg BW oral: ATE = 1140 mg/kg BW
INDEX: I13466_78_9 CAS: 13466-78-9 EC: 236-719-3 DELTA-3-CARENE		inhalation: ATE = 1.5 mg/l 4h (dust/mist) oral: ATE = 4800 mg/kg BW
INDEX: I106_22_9 CAS: 106-22-9 EC: 203-375-0 DL-CITRONELLOL		dermal: ATE = 2650 mg/kg BW oral: ATE = 3450 mg/kg BW

Information on ingredients :

[1] Substance for which maximum workplace exposure limits are available.

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated aera is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

If swallowed accidentally, do not allow to drink, do not induce vomiting and transfer to hospital immediately by ambulance. Show the label to the doctor.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO2)

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Avoid any contact with the skin and eyes.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the substance is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this substance.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention :

Handle in well-ventilated areas.

Never inhale this substance.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid skin and eye contact with this substance.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the substance is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep the container tightly closed in a dry, well-ventilated place.

Keep away from food and drink, including those for animals.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
127-91-3	20 ppm			SEN; A4	
80-56-8	20 ppm			SEN; A4	
5392-40-5	5 (IFV) ppm			Skin; SEN; A4	
13466-78-9	20 ppm			SEN; A4	

- Germany - AGW (BAuA - TRGS 900, 08/08/2019) :

CAS	VME :	VME :	Excess	Notes
5989-27-5		5 ppm 28 mg/m³		4(II)

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Butyl Rubber (Isobutylene-isoprene copolymer)

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state :	Fluid liquid.

Colour

Unspecified

Odour

Odour threshold :	Not stated.

Melting point

Melting point/melting range :	Not specified.

Freezing point

Freezing point / Freezing range :	Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range :	Not specified.

Flammability

Flammability (solid, gas) :	Not stated.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) :	Not stated.
Explosive properties, upper explosivity limit (%) :	Not stated.

Flash point

Flash Point :	57.00 °C.

Auto-ignition temperature

Self-ignition temperature :	Not specified.

Decomposition temperature

Decomposition point/decomposition range :	Not specified.

pH

pH :	Not relevant.
pH (aqueous solution) :	Not stated.

Kinematic viscosity

Viscosity :	Not stated.
Viscosity:	v < 7 mm2/s (40°C)

Solubility

Water solubility :	Insoluble.
Fat solubility :	Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water :	Not stated.

Vapour pressure

Vapour pressure (50°C) :	Below 110 kPa (1.10 bar).

Density and/or relative density

Density :	0.858 à 0.878

Relative vapour density

Vapour density :	Not stated.

9.2. Other information

Optical rotation :	-5° à 25°
Index of refraction :	1.462 à 1.482

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This substance is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the substance can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO2)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Exposure to vapours from this solvent in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

Repeated or prolonged contact with the substance may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

Splashes in the eyes may cause irritation and reversible damage

May cause an allergic reaction by skin contact.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

11.1.1. Substances

Acute toxicity :

1-ISOPROPYL- 4-METHYLBENZENE (CAS: 99-87-6)

Inhalation route (Vapours) :	LC50 = 3 mg/l Duration of exposure : 4 h

DL-CITRONELLOL (CAS: 106-22-9)

Oral route :	LD50 = 3450 mg/kg

Dermal route : LD50 = 2650 mg/kg

DELTA-3-CARENE (CAS: 13466-78-9)
Oral route : LD50 = 4800 mg/kg

Inhalation route (Dusts/mist) : LC50 = 1.5 mg/l
Duration of exposure : 4 h

TRANS-LINALOOL OXIDE-3,6-OXIDE (CAS: 34995-77-2)
Oral route : LD50 = 1140 mg/kg

Dermal route : LD50 = 2500 mg/kg

2,6-DIMETHYLOCTA-2,4,6-TRIENE (CAS: 673-84-7)
Oral route : LD50 = 1900 mg/kg

Dermal route : LD50 = 2400 mg/kg

BENZYLNITRILE (CAS: 140-29-4)
Oral route : LD50 = 260 mg/kg

Dermal route : LD50 = 270 mg/kg

Inhalation route (Vapours) : LC50 = 0.2 mg/l
Duration of exposure : 4 h

EUCALYPTOL (CAS: 470-82-6)
Oral route : LD50 = 2480 mg/kg

P-MENTHA-1,3-DIENE (CAS: 99-86-5)
Oral route : LD50 = 1680 mg/kg

INDOLE (CAS: 120-72-9)
Oral route : LD50 = 1000 mg/kg

Dermal route : LD50 = 790 mg/kg

P-MENTHA-1,4-DIENE (CAS: 99-85-4)
Oral route : LD50 = 3850 mg/kg

TERPINEN-4-OL (CAS: 562-74-3)
Oral route : LD50 = 1300 mg/kg

Dermal route : LD50 = 2500 mg/kg

METHYL ANTHRANILATE (CAS: 134-20-3)
Oral route : LD50 = 2780 mg/kg

TERPINOLENE (CAS: 586-62-9)
Oral route : LD50 = 3775 mg/kg

CIS-BETA-OCIMENE (CAS: 3338-55-4)

Oral route :	LD50 = 5000 mg/kg

NEROL (CAS: 106-25-2)

Oral route :	LD50 = 4500 mg/kg

ALPHA-TERPINEOL (CAS: 98-55-5)

Oral route :	LD50 = 4300 mg/kg

Aspiration hazard :

May be fatal if swallowed and enters airways.

Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.

Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 123-35-3 : IARC Group 2B : The agent is possibly carcinogenic to humans.

CAS 5989-27-5 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

SECTION 12 : ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

GERANYL ACETATE (CAS: 105-87-3)

Fish toxicity :	LC50 = 5 mg/l Species : Brevoortia patronus Duration of exposure : 96 h
Crustacean toxicity :	EC50 = 5 mg/l Species : Daphnia cucullata Duration of exposure : 48 h

12.2. Persistence and degradability

12.2.1. Substances

GERANYL ACETATE (CAS: 105-87-3)

Biodegradability :	no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the substance and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 - ICAO/IATA 2021).

14.1. UN number or ID number

3082

14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

((r)-p-mentha-1,8-diene)

14.3. Transport hazard class(es)

- Classification :

9

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material :

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M6	III	9	90	5 L	274 335 375 601	E1	3	-

Not subject to this regulation if Q <= 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	9	-	III	5 L	F-A. S-F	274 335 969	E1	Category A	-

Not subject to this regulation if Q <= 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	III	964	450 L	964	450 L	A97 A158 A197 A215	E1
	9	-	III	Y964	30 kg G	-	-	A97 A158 A197 A215	E1

Not subject to this regulation if Q <= 5 l / 5 kg (IATA 4.4.4 - DS A197)

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

Marine pollutant (IMDG 3.1.2.9):((r)-p-mentha-1,8-diene)

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/643 (ATP 16)
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/849 (ATP 17)

- Container information:

No data available.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the substance and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H226	Flammable liquid and vapour.
H228	Flammable solid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child .
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Abbreviations :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.
LC50 : The concentration of a test substance resulting in 50% lethality in a given period.
EC50 : The effective concentration of substance that causes 50% of the maximum response.
REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.
ATE : Acute Toxicity Estimate
BW : Body Weight
CMR: Carcinogenic, mutagenic or reprotoxic.
UFI : Unique formulation identifier.
STEL : Short-term exposure limit
TWA : Time Weighted Averages
TLV : Threshold Limit Value (exposure)
AEV : Average Exposure Value.
ADR : European agreement concerning the international carriage of dangerous goods by Road.
IMDG : International Maritime Dangerous Goods.
IATA : International Air Transport Association.
ICAO : International Civil Aviation Organisation
RID : Regulations concerning the International carriage of Dangerous goods by rail.
WGK : Wassergefahrdungsklasse (Water Hazard Class).
GHS07 : Exclamation mark
GHS08 : Health hazard
GHS09 : Environment
PBT: Persistent, bioaccumulable and toxic.
vPvB : Very persistent, very bioaccumulable.
SVHC : Substances of very high concern.