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Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code:	**00001**
Product name	**MOSQUITAN FAMILY**
UFI:	**K300-F0TV-W00W-A3NA**

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

Intended use **Scented patch**

Identified Uses	Industrial	Professional	Consumer
Scented patch	-	-	✔

1.3. Details of the supplier of the safety data sheet

Name	**LARUS PHARMA SRL**
Full address	**Via Marostica 34 – 20146 Milano, Italy**
District and Country	**Tel. +39 02 3310 5943**
e-mail address of the competent person responsible for the Safety Data Sheet	**info@laruspharma.com**

1.4. Emergency telephone number

For urgent inquiries refer to **Tel. +39 02 3310 5943 (office hours)**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1B	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

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Signal words: Warning

Hazard statements:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P501 Dispose of the product / container in accordance with the legislation in force concerning waste treatment.

P102 Keep out of reach of children.

P101 If medical advice is needed, have product container or label at hand.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P264 Wash your hands thoroughly after use.

P337+P313 If eye irritation persists: Get medical advice / attention.

Contains:

Citronellol
citronellal
geraniol
(-)-pin-2(10)-ene
(R)-p-mentha-1,8-diene
dl-linalool
Eugenol
Citral
Cineole
Caryophyllene
Pin-2(3)-ene
Geranyl acetate

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
citronellal		
INDEX -	24 ≤ x < 25,5	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1B H317
EC 203-376-6		
CAS 106-23-0		
REACH Reg. 01-2119474900-37-XXXX		
isopulegol		
INDEX -	2 ≤ x < 2,5	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 201-940-6		LD50 Oral: 936 mg/kg
CAS 89-79-2		
REACH Reg. 01-2119912164-48-XXXX		
Citronellol		
INDEX -	2 ≤ x < 2,5	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1B H317
EC 203-375-0		
CAS 106-22-9		
REACH Reg. 01-2119453995-23-XXXX		
Geranyl acetate		
INDEX -	0,6 ≤ x < 0,7	Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 203-341-5		
CAS 105-87-3		
REACH Reg. 01-2119973480-35-XXXX		
Pin-2(3)-ene		
INDEX -	0,4 ≤ x < 0,45	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=1, Aquatic Chronic 1 H410 M=1
EC 201-291-9		LD50 Oral: 500 mg/kg
CAS 80-56-8		
REACH Reg. 01-2119519223-49-XXXX		
Cineole		
INDEX -	0,4 ≤ x < 0,45	Flam. Liq. 3 H226, Skin Sens. 1B H317
EC 207-431-5		
CAS 470-82-6		
REACH Reg. 01-2119967772-24-XXXX		
Caryophyllene		
INDEX -	0,4 ≤ x < 0,45	Asp. Tox. 1 H304, Skin Sens. 1B H317
EC 201-746-1		

CAS 87-44-5 REACH Reg. 01-2120745237-53-XXXX **Citral**		
INDEX - EC 226-394-6 CAS 5392-40-5 REACH Reg. 01-2119462829-23-XXXX **Eugenol**	0,3035 ≤ x < 0,3535	Skin Irrit. 2 H315, Skin Sens. 1 H317
INDEX - EC 202-589-1 CAS 97-53-0 REACH Reg. 01-2119971802-33-XXXX **(R)-p-mentha-1,8-diene**	0,2 ≤ x < 0,25	Eye Irrit. 2 H319, Skin Sens. 1B H317
INDEX 601-096-00-2 EC 227-813-5 CAS 5989-27-5 REACH Reg. 01-2119529223-47-XXXX **dl-linalool**	0,15 ≤ x < 0,2	Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1B H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1, Classification note according to Annex VI to the CLP Regulation: C
INDEX 603-235-00-2 EC 201-134-4 CAS 78-70-6 REACH Reg. 01-2119474016-42-XXXX **7-methyl-3-methyleneocta-1,6-diene**	0,15 ≤ x < 0,2	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1B H317
INDEX - EC 204-622-5 CAS 123-35-3 REACH Reg. 01-2119514321-56-XXXX **geraniol**	0,15 ≤ x < 0,2	Flam. Liq. 3 H226, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411
INDEX - EC 203-377-1 CAS 106-24-1 REACH Reg. 01-2119552430-49-XXXX **(-)-pin-2(10)-ene**	0,15 ≤ x < 0,2	Skin Sens. 1 H317
INDEX - EC 242-060-2 CAS 18172-67-3 REACH Reg. 01-2119519230-54-XXXX	0,15 ≤ x < 0,2	Flam. Liq. 3 H226, Asp. Tox. 1 H304, Skin Irrit. 2 H315, Skin Sens. 1B H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.
In case of more severe symptoms, ask for immediate medical aid.
EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.
INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

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

If skin irritation or rash occurs: Get medical advice / attention.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

If there are no contraindications, spray powder with water to prevent the formation of dust.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.
Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

ESP	España	Límites de exposición profesional para agentes químicos en España 2023
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
	TLV-ACGIH	ACGIH 2023

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

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,014	mg/l
Normal value in marine water	0,0014	mg/l
Normal value for fresh water sediment	3,85	mg/kg
Normal value for marine water sediment	0,385	mg/kg
Normal value of STP microorganisms	18	mg/l
Normal value for the food chain (secondary poisoning)	133	mg/kg
Normal value for the terrestrial compartment	0,763	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		4,8 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	16,6 mg/m3	NPI	NPI	NPI	66,7 mg/m3
Skin	NPI	NPI	NPI	4,8 mg/kg bw/d	MED	NPI	MED	9,5 mg/kg bw/d

dl-linalool

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,2	mg/l
Normal value in marine water	0,02	mg/l
Normal value for fresh water sediment	2,22	mg/kg/d
Normal value for marine water sediment	0,222	mg/kg/d
Normal value for marine water, intermittent release	2	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	7,8	mg/kg
Normal value for the terrestrial compartment	0,327	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				2,49 mg/kg bw/d				
Inhalation				4,33 mg/m3				24,58 mg/m3
Skin	1,5 mg/cm2		1,5 mg/cm2	1,25 mg/kg bw/d	3 mg/cm2		3 mg/cm2	3,5 mg/kg bw/d

Geranyl acetate

Predicted no-effect concentration - PNEC		
Normal value in fresh water	3,72	ug/l
Normal value in marine water	372	ng/l
Normal value for fresh water sediment	442	ug/l
Normal value for marine water sediment	44,2	ug/l
Normal value for marine water, intermittent release	0,0372	mg/l
Normal value of STP microorganisms	8	mg/l
Normal value for the terrestrial compartment	0,0859	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				8,9 mg/kg bw/d				
Inhalation				15,4 mg/m3				62,59 mg/m3
Skin				17,75 mg/kg bw/d				35,5 mg/kg bw/d

Citral

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP		5			SKIN
NDS/NDSCh	POL	27		54		INHAL

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00678	mg/l
Normal value in marine water	0,000678	mg/l
Normal value for fresh water sediment	0,125	mg/kg/d
Normal value for marine water sediment	0,0125	mg/kg/d
Normal value for marine water, intermittent release	0,0678	mg/l
Normal value of STP microorganisms	1,6	mg/l
Normal value for the terrestrial compartment	0,0209	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		0,6 mg/kg bw/d				
Inhalation	LOW	NPI	LOW	2,7 mg/m3	LOW	NPI	LOW	9 mg/m3
Skin	LOW	NPI	0,14 mg/cm2	1 mg/kg bw/d	LOW	NPI	0,14 mg/cm2	1,7 mg/kg bw/d

Citronellol

Predicted no-effect concentration - PNEC		
Normal value in fresh water	2,4	ug/l
Normal value in marine water	0,24	ug/l
Normal value for fresh water sediment	25,6	ug/kg/d
Normal value for marine water sediment	2,56	ug/kg/d
Normal value for marine water, intermittent release	0,024	ug/l
Normal value of STP microorganisms	580	mg/l
Normal value for the terrestrial compartment	3,71	ug/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				13,8 mg/kg bw/d				
Inhalation	10 mg/m3		10 mg/m3	47,8 mg/m3	10 mg/m3		10 mg/m3	161,6 mg/m3
Skin	2,95 mg/cm2			196,4 mg/kg bw/d	2,95 mg/cm2			327,4 mg/kg bw/d

geraniol

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0108	mg/l
Normal value in marine water	0,00108	mg/l
Normal value for fresh water sediment	0,115	mg/kg/d
Normal value for marine water sediment	0,0115	mg/kg/d
Normal value of STP microorganisms	0,7	mg/l
Normal value for the terrestrial compartment	0,0167	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		2 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	3,5 mg/m3	NPI	NPI	NPI	11,8 mg/m3
Skin	MED	NPI	1,18 mg/cm2	2,5 mg/kg bw/d	MED	NPI	11,8 mg/cm2	4,2 mg/kg bw/d

Pin-2(3)-ene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH			20			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	606	ng/l
Normal value in marine water	60,6	ng/l
Normal value for fresh water sediment	157	ug/kg
Normal value for marine water sediment	15,7	ug/kg
Normal value for marine water, intermittent release	0,003	mg/l
Normal value for fresh water, intermittent release	0,0003	mg/l
Normal value of STP microorganisms	200	ug/l
Normal value for the food chain (secondary poisoning)	8,76	mg/kg
Normal value for the terrestrial compartment	0,0317	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		0,225 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	0,674 mg/m3	NPI	NPI	NPI	3,8 mg/m3
Skin	MED	NPI	MED	0,225 mg/kg bw/d	MED	NPI	MED	0,542 mg/kg bw/d

Cineole

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,057	mg/l
Normal value in marine water	0,0057	mg/l
Normal value for fresh water sediment	1,425	mg/kg/d
Normal value for marine water sediment	0,1425	mg/kg/d
Normal value for marine water, intermittent release	0,57	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	40	mg/kg
Normal value for the terrestrial compartment	0,25	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		600 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	1,74 mg/m3	NPI	NPI	NPI	7,05 mg/m3
Skin	NPI	NPI	MED	1 mg/kg bw/d	NPI	NPI	MED	2 mg/kg bw/d

Eugenol

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00113	mg/l
Normal value in marine water	0,000113	mg/l
Normal value for fresh water sediment	0,081	mg/kg
Normal value for marine water sediment	0,0081	mg/kg
Normal value for water, intermittent release	0,0113	mg/l
Normal value for the terrestrial compartment	0,015	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		3 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	5,22 mg/m3	NPI	NPI	NPI	21,2 mg/m3
Skin	NPI	NPI	NPI	3 mg/kg bw/d	MED	NPI	MED	6 mg/kg bw/d

citronellal

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00868	mg/l
Normal value in marine water	0,00087	mg/l
Normal value for fresh water sediment	0,159	mg/kg/d
Normal value for marine water sediment	0,0159	mg/kg/d
Normal value for marine water, intermittent release	0,0868	mg/l
Normal value of STP microorganisms	4	mg/l
Normal value for the terrestrial compartment	0,0267	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		0,6 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	2,7 mg/m3	NPI	NPI	NPI	9 mg/m3
Skin	LOW	NPI	0,14 mg/cm2	1 mg/kg bw/d	LOW	NPI	0,14 mg/cm2	1,7 mg/kg bw/d

(-)-pin-2(10)-ene

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,001	mg/l
Normal value in marine water	0,0001	mg/l
Normal value for fresh water sediment	0,337	mg/kg/d
Normal value for marine water sediment	0,0337	mg/kg/d
Normal value of STP microorganisms	3,26	mg/l
Normal value for the food chain (secondary poisoning)	13,1	mg/kg

Normal value for the terrestrial compartment	0,0671	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		0,3 mg/kg bw/d				
Inhalation		NPI		1 mg/m3		NPI		5,69 mg/m3
Skin		NPI	0,027 mg/cm2	0,3 mg/kg bw/d		NPI	0,054 mg/cm2	0,8 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).
Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

Protect your hands with gloves of the following type:
Material: Nitrile rubber (NBR)
The indicated material is a possible choice; other materials can be adequate, depending on the specifications indicated by the manufacturer.
Thickness: 0,7 mm
Glove thickness must be selected based on the minimum required breakthrough time.
Breakthrough time: 480 min
Glove resistance depends on various elements, such as temperature and other environmental factors.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN ISO 16321).

RESPIRATORY PROTECTION
None required, unless indicated otherwise in the chemical risk assessment.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	solid	
Colour	white - yellow	
Odour	characteristic	
Melting point / freezing point	not available	
Initial boiling point	not applicable	
Flammability	not available	
Lower explosive limit	not applicable	Reason for missing data:The product is solid
Upper explosive limit	not applicable	Reason for missing data:The product is solid
Flash point	not applicable	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	Reason for missing data:substance/mixture is non-soluble (in water)
Kinematic viscosity	not applicable	Reason for missing data:The product is solid
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not applicable	Reason for missing data:The product is a blend
Vapour pressure	not available	
Density and/or relative density	not available	
Relative vapour density	not applicable	Reason for missing data:The product is solid
Particle characteristics	not available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

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

LD50 (Dermal):	> 5000 mg/kg
LD50 (Oral):	2000 mg/kg Rat

dl-linalool

LD50 (Dermal):	5610 mg/kg rabbit
LD50 (Oral):	2200 mg/kg

7-methyl-3-methyleneocta-1,6-diene

LD50 (Dermal):	5000 mg/kg rabbit
LD50 (Oral):	3380 mg/kg mouse

Geranyl acetate

LD50 (Oral):	6330 mg/kg rat

Citral

LD50 (Dermal):	2000 mg/kg
LD50 (Oral):	6800 mg/kg

Citronellol

LD50 (Dermal):	2650 mg/kg
LD50 (Oral):	3450 mg/kg

geraniol

LD50 (Dermal):	5000 mg/kg rabbit
LD50 (Oral):	3600 mg/kg rat

Pin-2(3)-ene

LD50 (Dermal):	2000 mg/kg
LD50 (Oral):	500 mg/kg rat

Cineole

LD50 (Dermal):	> 2000 mg/kg rabbit
LD50 (Oral):	> 2000 mg/kg rat

Eugenol

LD50 (Dermal):	> 5000 mg/kg
LD50 (Oral):	> 2000 mg/kg rat

Caryophyllene

LD50 (Oral):	5000 mg/kg mouse

citronellal

LD50 (Dermal):	2000 mg/kg rat
LD50 (Oral):	2150 mg/kg rat

isopulegol

LD50 (Oral):	936 mg/kg rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it has negative effects on the aquatic environment.

12.1. Toxicity

(R)-p-mentha-1,8-diene	
LC50 - for Fish	0,688 mg/l/96h
EC50 - for Crustacea	0,307 mg/l/48h
EC50 - for Algae / Aquatic Plants	0,214 mg/l/72h
EC10 for Crustacea	0,153 mg/l/28d 21 d
EC10 for Algae / Aquatic Plants	0,149 mg/l/72h
Chronic NOEC for Fish	0,37 mg/l 8 d
Chronic NOEC for Crustacea	0,05 mg/l 21 d
Chronic NOEC for Algae / Aquatic Plants	0,09 mg/l 48 h
dl-linalool	
LC50 - for Fish	27,8 mg/l/96h
EC50 - for Crustacea	59 mg/l/48h
EC50 - for Algae / Aquatic Plants	88,3 mg/l/72h 96 h
7-methyl-3-methyleneocta-1,6-diene	
EC50 - for Crustacea	1,47 mg/l/48h
EC50 - for Algae / Aquatic Plants	0,342 mg/l/72h
Geranyl acetate	
LC50 - for Fish	68,12 mg/l/96h
EC50 - for Crustacea	14,1 mg/l/48h
EC50 - for Algae / Aquatic Plants	3,72 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	0,585 mg/l 72 h
Citral	
LC50 - for Fish	6,78 mg/l/96h
EC50 - for Crustacea	6,8 mg/l/48h
EC50 - for Algae / Aquatic Plants	103,84 mg/l/72h
EC10 for Algae / Aquatic Plants	3 mg/l/72h
Citronellol	
LC50 - for Fish	14,66 mg/l/96h

EC50 - for Crustacea	17,48 mg/l/48h
EC50 - for Algae / Aquatic Plants	2,4 mg/l/72h

geraniol

LC50 - for Fish	22 mg/l/96h
EC50 - for Crustacea	10,8 mg/l/48h
EC50 - for Algae / Aquatic Plants	13,1 mg/l/72h
EC10 for Algae / Aquatic Plants	3,77 mg/l/72h

Pin-2(3)-ene

LC50 - for Fish	0,303 mg/l/96h
EC50 - for Crustacea	0,475 mg/l/48h
Chronic NOEC for Algae / Aquatic Plants	0,131 mg/l

Cineole

LC50 - for Fish	57 mg/l/96h
EC50 - for Crustacea	100 mg/l/48h
EC50 - for Algae / Aquatic Plants	74 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	37 mg/l

Eugenol

LC50 - for Fish	13 mg/l/96h
EC50 - for Crustacea	1,13 mg/l/48h
EC50 - for Algae / Aquatic Plants	24 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	23 mg/l

citronellal

LC50 - for Fish	22 mg/l/96h
EC50 - for Crustacea	8,7 mg/l/48h
EC50 - for Algae / Aquatic Plants	13,33 mg/l/72h

isopulegol

EC50 - for Crustacea	53,2 mg/l/48h
EC50 - for Algae / Aquatic Plants	50,6 mg/l/72h

(-)-pin-2(10)-ene

LC50 - for Fish	0,502 mg/l/96h
EC50 - for Crustacea	1,194 mg/l/48h
EC50 - for Algae / Aquatic Plants	0,826 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	0,378 mg/l 48 h

12.2. Persistence and degradability

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

Rapidly degradable
dl-linalool

Rapidly degradable
7-methyl-3-methyleneocta-1,6-diene

Rapidly degradable
Geranyl acetate

Rapidly degradable
Citral

Rapidly degradable
Citronellol

Rapidly degradable
Pin-2(3)-ene

Rapidly degradable
Cineole

Rapidly degradable
Eugenol

Rapidly degradable
Caryophyllene

Rapidly degradable
citronellal

Rapidly degradable
isopulegol

Rapidly degradable
(-)-pin-2(10)-ene

Rapidly degradable

12.3. Bioaccumulative potential

(R)-p-mentha-1,8-diene	
Partition coefficient: n-octanol/water	4,38 Log Kow
BCF	864,8
dl-linalool	
Partition coefficient: n-octanol/water	2,97 Log Kow
Pin-2(3)-ene	
Partition coefficient: n-octanol/water	4,83
BCF	2800
Cineole	
Partition coefficient: n-octanol/water	2,74 Log Kow
BCF	112
Eugenol	
Partition coefficient: n-octanol/water	2,27
BCF	31

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number or ID number

not applicable

14.2. UN proper shipping name

not applicable

14.3. Transport hazard class(es)

not applicable

14.4. Packing group

not applicable

14.5. Environmental hazards

not applicable

14.6. Special precautions for user

not applicable

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
Point 40

Contained substance
Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level

- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
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- IFA GESTIS website
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- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.