

# Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

### 1.1. Product identifier

Code: 411 00 08100-2666  
Product name: 1x8 SPRAY CLEANER

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

Intended use: Universal detergent, degreaser for mechanical parts

### 1.3. Details of the supplier of the safety data sheet

Name: Meccanocar Italia S.r.l.  
Full address: Via San Francesco, 22  
District and Country: 56033 Capannoli (PI)  
Italy

Tel. +39 0587 609433

Fax +39 0587 607145

e-mail address of the competent person

responsible for the Safety Data Sheet: [moreno.meini@meccanocar.it](mailto:moreno.meini@meccanocar.it)

### 1.4. Emergency telephone number

For urgent inquiries refer to: +39 0587 609433

## 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 2015/830. 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:

Aerosol, category 1	H222 H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic 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:



Signal words: Danger

Hazard statements:

<b>H222</b>	Extremely flammable aerosol.
<b>H229</b>	Pressurised container: may burst if heated.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>EUH208</b>	Contains: LINALOOL, geraniol May produce an allergic reaction.

Precautionary statements:

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P251</b>	Do not pierce or burn, even after use.
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
<b>P211</b>	Do not spray on an open flame or other ignition source.

**Contains:** NAPHTHA (PETROLEUM), HYDROTREATED LIGHT HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC (R)-P-MENTHA-1,8-DIENE  
2-BUTOXYETHANOL

### 2.3. Other hazards

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

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>2-BUTOXYETHANOL</b>		
CAS 111-76-2	30,75 ≤ x < 33,3	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 203-905-0		
INDEX 603-014-00-0		
Reg. no. 01-2119475108-36-XXXX		

**HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC**

CAS - 30 ≤ x &lt; 32,5 Asp. Tox. 1 H304

EC 920-107-4

INDEX -

Reg. no. 01-2119453414-43-XXXX

**NAPHTHA (PETROLEUM), HYDROTREATED LIGHT**

CAS 64742-49-0 16,5 ≤ x &lt; 18 Asp. Tox. 1 H304, Classification note according to Annex VI to the CLP Regulation: P

EC 265-151-9

INDEX 649-328-00-1

**BUTANE**

CAS 106-97-8 9 ≤ x &lt; 10,5 Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: C U

EC 203-448-7

INDEX 601-004-00-0

Reg. no. 01-2119474691-32-XXXX

**(R)-P-MENTHA-1,8-DIENE**

CAS 5989-27-5 8 ≤ x &lt; 9 Flam. Liq. 3 H226, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 1 H410 M=1, Classification note according to Annex VI to the CLP Regulation: C

EC 227-813-5

INDEX 601-029-00-7

Reg. no. 01-2119529223-47-XXXX

**LINALOOL**

CAS 78-70-6 0,15 ≤ x &lt; 0,2 Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317

EC 201-134-4

INDEX -

Reg. no. 05-2114473112-59-XXXX

**GERANIOL**

CAS 106-24-1 0,15 ≤ x &lt; 0,2 Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1 H317

EC 203-377-1

INDEX -

Reg. no. 01-2119552430-49-XXXX

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

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 9,14 %

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

**EYES:** Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.  
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

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

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

Information not available

## 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

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the 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.

#### 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

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

### 6.2. Environmental precautions

Do not disperse in the environment.

### 6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. 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

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

### 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 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
ITA	Italia	DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diário da República, 1.ª série - N.º 111 - 11 de junho de 2018
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2019

### 2-BUTOXYETHANOL Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	98	20	245	50	SKIN
VLEP	FRA	49	10	246	50	SKIN
WEL	GBR	123	25	246	50	SKIN
VLEP	ITA	98	20	246	50	SKIN
TLV	NOR	50	10			SKIN
VLE	PRT	98	20	246	50	SKIN
OEL	EU	98	20	246	50	SKIN
TLV-ACGIH		97	20			
Predicted no-effect concentration - PNEC						
Normal value in fresh water				8,8	mg/l	

## 1x8 SPRAY CLEANER

Normal value in marine water	0,88	mg/l
Normal value for fresh water sediment	34,6	mg/kg
Normal value for marine water sediment	3,46	mg/kg
Normal value of STP microorganisms	463	mg/l
Normal value for the food chain (secondary poisoning)	0,02	mg/kg
Normal value for the terrestrial compartment	2,33	mg/kg

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		26,7 mg/kg bw/d		6,3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3		59 mg/m3	246 mg/m3			98 mg/m3
Skin		89 mg/kg/d		75 mg/kg bw/d		89 mg/kg bw/d		125 mg/kg bw/d

**BUTANE****Threshold Limit Value**

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
VLA	ESP		1000	Gases
VLEP	FRA	1900	800	
WEL	GBR	1450	600	1810 750
TLV	NOR	600	250	
TLV-ACGIH				1000

**(R)-P-MENTHA-1,8-DIENE****Threshold Limit Value**

Type	Country	TWA/8h	STEL/15min	Remarks / Observations
		mg/m3	ppm	
VLA	ESP	168	30	SKIN
TLV	NOR	140	25	

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	1,4	mg/l
Normal value in marine water	1,4	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	1,8	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**

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

## 1x8 SPRAY CLEANER

**geraniol**

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,011	mg/l
Normal value in marine water	0,001	mg/l
Normal value for fresh water sediment	0,115	mg/kg
Normal value for marine water sediment	0,011	mg/kg
Normal value of STP microorganisms	0,7	mg/l
Normal value for the terrestrial compartment	0,017	mg/kg

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				13,75 mg/kg bw/d				
Inhalation				47,8 mg/m3			1180	161,6 mg/m3
Skin			1180 mg/kg bw/d	7,5 mg/kg bw/d			1180 mg/kg bw/d	12,5 mg/kg bw/d

**LINALOOL**

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,2	mg/l
Normal value in marine water	0,2	mg/l
Normal value for fresh water sediment	2,22	mg/kg
Normal value for marine water sediment	0,222	mg/kg
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

**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		1,2 mg/kg bw/d		0,2 mg/kg bw/d				
Inhalation		4,1 mg/m3		0,7 mg/m3		16,5 mg/m3		2,8 mg/m3
Skin	1,5 mg/kg bw/d	2,5 mg/kg bw/d	1,5 mg/kg bw/d	1,25 mg/kg bw/d	3 mg/kg bw/d	3 mg/kg bw/d	3 mg/kg bw/d	2,5 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.

**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**

None required.

**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 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

**RESPIRATORY PROTECTION**

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

**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.

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Chemical resistant gloves are recommended. Nitrile, CEN EN 420 and EN 374 standards provide general requirements and lists of glove types.

(R)-P-MENTHA-1,8-DIENE

Chemical resistant protective gloves (standard EN 374-1).

GERANIOL

Chemical resistant protective gloves (EN 374)

Suitable material for short-term contact and / or splashes (recommended: at least protection index 2, corresponding > 30 minutes of breakthrough time according to EN 374)

butyl rubber (butyl) - coating thickness 0.7 mm

nitrile rubber (NBR) - coating thickness of 0.4 mm

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	aerosol
Colour	colourless
Odour	typical
Odour threshold	Not available
pH	Not available

Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	-26 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	0,781
Solubility	partially soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

## 9.2. Other information

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.

#### 2-BUTOXYETHANOL

Decomposes under the effect of heat.

### 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.

#### 2-BUTOXYETHANOL

May react dangerously with: aluminium, oxidising agents. Forms peroxides with: air.

#### BUTANE

Vapors can form an explosive mixture with air.

**10.4. Conditions to avoid**

Avoid overheating.

2-BUTOXYETHANOL

Avoid exposure to: sources of heat, naked flames.

High temperatures and sources of ignition. Prolonged exposure with air / oxygen and light.

BUTANE

Avoid heat and sources of ignition.

(R) -P-MENTHA-1,8-DIENE

Prolonged or excessive heat and / or exposure to air can cause non-hazardous decomposition and / or oxidation of the substance.  
Keep away from heat and other causes of fire.

LINALOOL

Heat, exposure to air.

**10.5. Incompatible materials**

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Strong oxidants.

2-BUTOXYETHANOL

Oxidizing agents.

BUTANE

Strong oxidizing agents, chlorine, oxygen.

(R) -P-MENTHA-1,8-DIENE

Avoid contact with strong acids and strong oxidizing agents.

geraniol

Strong oxidizing agents, acids, bases.

LINALOOL

Basici  
Strong acids  
Strong oxidizing agents

**10.6. Hazardous decomposition products****2-BUTOXYETHANOL**

May develop: hydrogen.

Carbon oxides.

**BUTANE**

In case of fire or production of thermal decomposition, for example, carbon monoxide, carbon dioxide (CO<sub>2</sub>).

**LINALOOL**

It decomposes on heating in the presence of air.

**SECTION 11. Toxicological information****11.1. Information on toxicological effects**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

LC50 (Inhalation) of the mixture:  
Not classified (no significant component)  
LD50 (Oral) of the mixture:  
1746,22 mg/kg  
LD50 (Dermal) of the mixture:  
Not classified (no significant component)

**2-BUTOXYETHANOL**

LD50 (Oral) 615 mg/kg Rat

LD50 (Dermal) 405 mg/kg Rabbit

LC50 (Inhalation) 2,2 mg/l/4h Rat

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 401

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: Not classified

Method: Equivalent or similar to OECD 403

Reliability: 1

Species: Rat (Crj; CD (SD); male / female)

Route of exposure: Inhalation (vapors)

Results: Not classified

Method: Equivalent or similar to OECD 402

Reliability: 1

Species: Rat (Crj; CD (SD); male / female)

Route of exposure: Dermal

Results: Not classified

2-BUTOXYETHANOL

Method: OECD 401

Reliability: 1

Species: guinea pig (Hartley; male / female)

Route of exposure: Oral

Results: LD50 = 1414 mg / kg bw

Method: CFR title 49, section 173.132

Reliability: 2

Species: Guinea pig (Dunkin-Hartley; male / female)

Route of exposure: Inhalation (vapor)

Results: Not classified

Method: OECD 402

Reliability: 1

Species: guinea pig (Hartley; male / female)

Route of exposure: Dermal

Results: Not classified

BUTANE

Method: Not indicated

Reliability: 2

Species: Rat (Alderley Park (SPF); male / female)

Route of exposure: Inhalation

Results: LC50: 1 443 mg / L air

(R) -P-MENTHA-1,8-DIENE

Method: OECD 423

Reliability: 1

Species: Rat (Sprague-Dawley; female)

Route of exposure: Oral

Results: LD50> 2000 mg / kg bw

geraniol

Method: Not indicated

Reliability: 2

Species: Rat (Osborne-Mendel; male / female)

Route of exposure: Oral

Results: LD50 = 3600 mg / kg bw  
Method: Not indicated  
Reliability: 2  
Species: Rabbit  
Route of exposure: Dermal  
Results: LD50> 5000 mg / kg bw  
Bibliographic reference: Opdyke DLJ, Fragrance Raw Materials Monographs (1974)

**LINALOOL**

Method: Equivalent or similar to OECD 401  
Reliability: 2  
Species: Rat (Osborne-Mendel; male / female)  
Route of exposure: Oral  
Results: LD50 2 790 mg / kg bw  
Bibliographic reference: Jenner PM, Hagan EC, Taylor JM, Cook EL and Fitzhugh OG, Food flavors and compounds of related structure; I. Acute oral toxicity (1964)  
Method: Not indicated

Reliability: 2  
Species: Mouse (Swiss; male / female)  
Route of exposure: Inhalation (vapors)  
Results: LC50> 3.2 mg / L air  
Bibliographic reference: Buchbauer G, Jirovetz L, Jäger W, Dietrich H, Plank C and Karamat E, Aromatherapy: Evidence for Sedative Effects of the Essential Oil of Lavender after Inhalation (1991)

Method: Equivalent or similar to OECD 402

Reliability: 2  
Species: Rabbit (albino)  
Route of exposure: Dermal  
Results: LD50 5 610 mg / kg bw

**SKIN CORROSION / IRRITATION**

Causes skin irritation

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 404

Reliability: 1  
Species: Rabbit (New Zealand White)  
Route of exposure: Dermal  
Results: Irritating

**2-BUTOXYETHANOL**

Method: EU Method B.4

Reliability: 2  
Species: Rabbit (New Zealand white; male / female)  
Route of exposure: Dermal  
Results: Irritating  
Bibliographic reference: Jacobs G, Martens M, Mosselmans G, Proposal of limit concentrations for skin irritation within the context of a new EEC directive on the classification and labeling of preparations. (1987)

**(R)-P-MENTHA-1,8-DIENE**

Method: OECD 404

Reliability: 2  
Species: Rabbit (albino)  
Route of exposure: Dermal  
Results: Not irritating

**GERANIOL**

Method: OECD 404  
Reliability: 2  
Species: Rabbit  
Route of exposure: Dermal  
Results: Irritating

**LINALOOL**

Method: OECD 404  
Reliability: 1  
Species: Rabbit (albino)  
Route of exposure: Dermal  
Results: Irritating

**SERIOUS EYE DAMAGE / IRRITATION**

Causes serious eye irritation

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD 405  
Reliability: 1  
Species: Rabbit (New Zealand White)  
Route of exposure: Ocular  
Results: Not irritating

**2-BUTOXYETHANOL**

Method: OECD 405  
Reliability: 1  
Species: Rabbit (New Zealand white; male / female)  
Route of exposure: Ocular  
Results: Irritating

**(R)-P-MENTHA-1,8-DIENE**

Method: OECD 405  
Reliability: 2  
Species: Rabbit (New Zealand White)  
Route of exposure: Ocular  
Results: Not irritating

**GERANIOL**

Method: OECD 405  
Reliability: 2  
Species: Rabbit (albino SPF)  
Route of exposure: Ocular  
Results: Category 1 (irreversible effects on the eye)

**LINALOOL**

Method: Equivalent or similar to OECD 405  
Reliability: 2  
Species: Rabbit (New Zealand White)  
Route of exposure: Ocular  
Results: Irritating

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

May produce an allergic reaction.Contains:LINALLOOL  
geraniol

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 406

Reliability: 2

Species: guinea pig (Hartley; female)

Route of exposure: Dermal

Results: Not sensitizing

2-BUTOXYETHANOL

Method: OECD 406

Reliability: 1

Species: Guinea pig (Dunkin-Hartley; male / female)

Route of exposure: Dermal

Results: Not sensitizing

Method: Equivalent or similar to OECD 474-Test in vivo

Reliability: 1

Species: Mouse (B6C3F1)

Results: Negative

(R)-P-MENTHA-1,8-DIENE

Method: OECD 429

Reliability: 2

Species: Mouse (CBA / Ca; female)

Route of exposure: Dermal

Results: Sensitizers

GERANIOL

Method: Equivalent or similar to OECD 429

Reliability: 2

Species: Mouse (CBA; female)

Route of exposure: Dermal

Results: Sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: OECD 471 in vitro test

Reliability: 1

Species: S. typhimurium

Results: Negative with and without metabolic activation

Method: Equivalent or similar to OECD 474

Reliability: 1

Species: Mouse (CD-1; male / female)

Route of exposure: Oral

Results: Negative

2-BUTOXYETHANOL

Method: Equivalent or similar to OECD 471 in vitro test

**1x8 SPRAY CLEANER**

Reliability: 1

Species: *S. typhimurium* TA 1535

Results: negative

Bibliographic reference:

Method: Equivalent or similar to OECD 474-Test in vivo

Reliability: 1

Species: Mouse (B6C3F1)

Results: Negative

**BUTANE**

Method: OECD 471 in vitro test

Reliability: 1

Species: *Salmonella* strains, *S. typhimurium*

Results: Negative without metabolic activation

Method: OECD 474-test in vivo

Reliability: 1

Species: Rat (Sprague-Dawley CD; male / female)

Route of exposure: Inhalation (gas)

Results: Negative

**(R) -P-MENTHA-1,8-DIENE**

Method: OECD 471 in vitro test

Reliability: 1

Species: *S. typhimurium*

Results: Negative with and without metabolic activation

Bibliographic reference:

Method: Comet assay (Tice et al., 2000) - in vivo test

Reliability: 2

Species: Rat (OFA Sprague-Dawley; male)

Route of exposure: Oral

Results: Negative

**geraniol**

Method: OECD 476 in vitro test

Reliability: 1

Species: Chinese hamster

Results: Negative with and without metabolic activation

Method: OECD 474-test in vivo

Reliability: 1

Species: Mouse (NMR1; male)

Route of exposure: Oral

Results: Negative

**LINALOOL**

Method: Equivalent or similar to OECD 476 in vitro test

Reliability: 1

Species: Mouse (lymphoma)

Results: Negative with and without metabolic activation

Method: OECD 474-test in vivo

Reliability: 1

Species: Mouse (CD-1; male / female)

Route of exposure: Oral

Results: Negative

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

**1x8 SPRAY CLEANER**

Method: Equivalent or similar to OECD 453

Reliability: 1

Species: Rat (F344 / N; male / female)

Route of exposure: Inhalation (vapors)

Results: Negative. The NOAEC for rat females was determined to be 2200 mg / m3. The NOAEC for male rats was determined to be 138 mg / m3.

**(R)-P-MENTHA-1,8-DIENE**

Method: Equivalent or similar to OECD 451

Reliability: 2

Species: Mouse (B6C3F1; male / female)

Route of exposure: Oral

Results: Negative

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

**2-BUTOXYETHANOL**

Method: Not indicated

Reliability: 1

Species: Mouse (CD-1; male / female)

Route of exposure: Oral

Results: NOAEL = 720 mg / kg bw / day

Bibliographic reference: Heindel JJ, Gulati DK, Russel VS, Reel JR, Lawton AD and Lamb JC, Assessment of Ethylene Glycol Monobutyl and monophenol Ether reproductive toxicity using a continuous breeding protocol in Swiss CD-1 mice (1990).

**BUTANE**

Method: OECD 413

Reliability: 1

Species: Rat (Sprague-Dawley CD; male / female)

Route of exposure: Inhalation

Results: NOAEC 10000 ppm

Adverse effects on sexual function and fertility

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD TG 413

Reliability: 1

Species: Rat (Fischer 344; male / female)

Route of exposure: Inhalation (vapors)

Results: Negative. NOAEC (fertility) > = 400 ppm

**(R) -P-MENTHA-1,8-DIENE**

Method: Equivalent or similar to OECD 408

Reliability: 2

Species: Mouse (B6C3F1; male / female)

Route of exposure: Oral

Results: Negative. NOAEL (fertility) = 500 mg / kg bw / day.

**GERANIOL**

Method: OECD 421

Reliability: 1

Species: Rat (Wistar; male / female)

Route of exposure: Dermal

Results: Negative

**LINALOOL**

Method: Equivalent or similar to OECD 421

Reliability: 1

Species: Rat (CrI: CD (SD) BR; female)

Route of exposure: Oral

Results: Negative. NOAEL (fertility) 500 mg / kg / day

Adverse effects on development of the offspring

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Guidelines for Reproduction Studies for Safety and Evaluation of Drugs for Human Use, Segment II (Teratology Study)

Reliability: 1

Species: Rat (Sprague-Dawley)

Route of exposure: Inhalation (vapors)

Results: Negative. NOAEC (development) > = 300 ppm

**GERANIOL**

Method: OECD 414

Reliability: 1

Species: Rat (Wistar)

Route of exposure: Oral

Results: NOAEL (development) = 300 mg / kg bw / day

**LINALOOL**

Method: ICH Guideline on detection of toxicity to reproduction for medicinal products (FDA, 1994)

Reliability: 1

Species: Rat (CrI: CD (SD) BR)

Route of exposure: Oral

Results: Negative. NOAEL (development) 1000 mg / kg / day

**STOT - SINGLE EXPOSURE**

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

**2-BUTOXYETHANOL**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

**BUTANE**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

**(R)-P-MENTHA-1,8-DIENE**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

**geraniol**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

**LINALOOL**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

Method: Equivalent or similar to OECD 422

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: Negative. NOAEL > = 1000 mg / kg / day

Method: Equivalent or similar to OECD 413

Reliability: 1

Species: Rat (albino; male / female)

Route of exposure: Inhalation (vapors)

Results: Negative. NOAEC = 10186 mg / m3

**2-BUTOXYETHANOL**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for repeated exposure.

**BUTANE**

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

**(R) -P-MENTHA-1,8-DIENE**

Method: Equivalent or similar to OECD 409

Reliability: 2

Species: Dog (Beagle; male / female)

Route of exposure: Oral

Results: Negative. NOAEL = 100 mg / kg bw / day

**geraniol**

Method: Not indicated

Reliability: 2

Species: Rat (Osborne-Mendel; male / female)

Route of exposure: Oral

Results: Negative. NOEL > 550 mg / kg bw / day

Bibliographic reference: Food Flavors and Compounds of Related Structure. II. Subacute and Chronic Toxicity, Hagan EC, Hansen WH, Fitzhugh OG, Jenner PM, Jones WI, Taylor JM, Long EL, Nelson AA, Brouwer JB (1967)

Method: Not indicated

Reliability: 2

Species: Rat (CD and Sprague-Dawley; male / female)

Route of exposure: Inhalation

Results: Negative

Bibliographic reference: Subchronic inhalation studies of complex fragrance mixtures in rats and hamsters, Fukayama MY, Easterday OD, Serafino PA, Renskers KJ, North-Root H and Schrankel KR (1999)

Method: OECD 421

Reliability: 1

Species: Rat (Wistar; male / female)

Route of exposure: Dermal

Results: Negative. NOAEL = 300 mg / kg bw / day

**LINALOOL**

Method: Equivalent or similar to OECD 407

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: Negative. NOAEL 160 mg / kg bw / day

Method: Equivalent or similar to OECD 411  
 Reliability: 2  
 Species: Rat (Sprague-Dawley; male / female)  
 Route of exposure: Dermal  
 Results: Negative. NOAEL 250 mg / kg bw / day

#### ASPIRATION HAZARD

Toxic for aspiration

## SECTION 12. Ecological information

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

### 12.1. Toxicity

#### (R)-P-MENTHA-1,8-DIENE

LC50 - for Fish	35 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	69,6 mg/l/48h Daphnia pulex

#### LINALOOL

LC50 - for Fish	27,8 mg/l/96h
EC50 - for Crustacea	59 mg/l/48h
EC50 - for Algae / Aquatic Plants	156,7 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	54,3 mg/l

### 12.2. Persistence and degradability

#### 2-BUTOXYETHANOL

Easily degradable.

#### BUTANE

Quickly degradable in water.

#### (R) -P-MENTHA-1,8-DIENE

Rapidly degradable in water, 71.4% in 28 days.

#### GERANIOL

Quickly degradable in water, 90% in 3 days.

#### LINALOOL

Rapidly degradable in water, 64.2% in 28 days.

#### BUTANE

Solubility in water	0,1 - 100 mg/l
---------------------	----------------

Rapidly degradable

#### 2-BUTOXYETHANOL

Solubility in water	1000 - 10000 mg/l
---------------------	-------------------

Rapidly degradable

#### (R)-P-MENTHA-1,8-DIENE

Solubility in water	0,1 - 100 mg/l
---------------------	----------------

Rapidly degradable

NAPHTHA (PETROLEUM),  
HYDROTREATED LIGHT  
Rapidly degradable

### 12.3. Bioaccumulative potential

BUTANE

Partition coefficient: n-octanol/water 1,09

2-BUTOXYETHANOL

Partition coefficient: n-octanol/water 0,81

(R)-P-MENTHA-1,8-DIENE

Partition coefficient: n-octanol/water 4,38

BCF 1022

### 12.4. Mobility in soil

NAPHTHA (PETROLEUM),  
HYDROTREATED LIGHT  
Partition coefficient: soil/water

1,78

### 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 greater than 0,1%.

### 12.6. 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.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

HYDROCARBONS, C12-C15, N-ALCANS, ISOALKANS, CYCLES, <2% AROMATIC

The product is suitable for combustion in a closed controlled burner for the value or disposal of the fuel by controlled incineration at very high temperatures to prevent the formation of undesirable combustion products.

2-Butoxyethanol

Dispose of as hazardous waste. Recover or recycle if possible. Otherwise incineration. Dispose according to local regulations.

BUTANE

No waste key number according to the European list of waste types can be assigned to this product, since this classification is based on the use (not yet determined) for which the product is intended for the consumer.

The key number for the waste must be determined according to the European waste type list (decision on the EU waste type list 2000/532 / EC) in collaboration with the disposal company / producer / authority Official.

(R) -P-MENTHA-1,8-DIENE

After a preliminary treatment, the product can be disposed of in a special waste incinerator in accordance with the rules relating to the disposal of special waste. Disposal must be carried out in accordance with local and national regulations.

geraniol

Respect national and local legal requirements.

LINALOOL

Do not throw waste into the sewers.

Do not contaminate ponds, waterways or canals  
chemical or used container.

## SECTION 14. Transport information

### 14.1. UN number

ADR / RID, IMDG, 1950  
IATA:

### 14.2. UN proper shipping name

ADR / RID: AEROSOLS  
IMDG: AEROSOLS  
IATA: AEROSOLS, FLAMMABLE

### 14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1
IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1



### 14.4. Packing group

ADR / RID, IMDG, -  
IATA:

### 14.5. Environmental hazards

ADR / RID: NO  
IMDG: NO  
IATA: NO

### 14.6. Special precautions for user

ADR / RID: HIN - Kemler: --

Limited  
Quantities: 1

Tunnel  
restriction

		L	code: (D)
IMDG:	Special Provision: - EMS: F-D, S-U	Limited Quantities: 1	
IATA:	Cargo:	L Maximum quantity: 150 Kg	Packaging instructions: 203
	Pass.:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special Instructions:	A145, A167, A802	

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

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/EC: P3a-E2

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

Point 40

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 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:

<b>Flam. Gas 1A</b>	Flammable gas, category 1A
<b>Aerosol 1</b>	Aerosol, category 1
<b>Aerosol 3</b>	Aerosol, category 3
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Press. Gas (Liq.)</b>	Liquefied gas
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>Aquatic Chronic 1</b>	Hazardous to the aquatic environment, chronic toxicity, category 1
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>H220</b>	Extremely flammable gas.
<b>H222</b>	Extremely flammable aerosol.
<b>H229</b>	Pressurised container: may burst if heated.
<b>H226</b>	Flammable liquid and vapour.
<b>H280</b>	Contains gas under pressure; may burst if heated.
<b>H302</b>	Harmful if swallowed.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H318</b>	Causes serious eye damage.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.
<b>H411</b>	Toxic to aquatic life with long lasting effects.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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 NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%

- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
  2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
  3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
  4. Regulation (EU) 2015/830 of the European Parliament
  5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
  6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
  7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
  8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
  9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
  10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
  11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
  16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
  - Handling Chemical Safety
  - INRS - Fiche Toxicologique (toxicological sheet)
  - Patty - Industrial Hygiene and Toxicology
  - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
  - IFA GESTIS website
  - ECHA website
  - 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.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

**Changes to previous review:**

The following sections were modified:

01 / 02 / 03 / 08 / 09 / 10 / 11 / 12 / 13 / 15 / 16.