

SAFETY DATA SHEET

According to Regulation (EU) No 830/2015

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

1.1. Product identifier

Product name : VECTAIR AIROMA CITRUSTINGLE
Product code : 1252131

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

Application : Professional use. (SU22). Air care products (PC3). Airfreshener.

1.3. Details of the supplier of the safety data sheet

Distributor : Hygiene Systems Australia Pty Ltd
Unit 1, 2 Logistics street, Yatala, Qld, 4207

Telephone : 0738018500
Emergency telephone : 0450697282

SECTION 2 HAZARDS IDENTIFICATION

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2.1. Classification of the substance or mixture

ADG : F+, H222 Extremely flammable
Classification : Xi, H317 May cause an allergic skin reaction.

CLP classification (1272/2008/EC) : Aerosols, category 1. Eye irritation, category 2. Skin sensitization, category 1. Specific target organ toxicity after single exposure, category 3. Hazardous to the aquatic environment — Chronic category 3.

Remarks : The classification of this product is based on the non-aerosolised form of the mixture (on basis of section 1.1.3.7. of Regulation (EC) No 1272/2008).

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Danger

H- and P-phrases : H222 Extremely flammable aerosol.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H229 Pressurised container: May burst if heated.
H412 Harmful to aquatic life with long lasting effects.
P251 Do not pierce or burn, even after use.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

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P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P261 spray Avoid breathing spray.
P403 Store in a well-ventilated place.

Additional labelling : Contains: Alpha-Pinenes; Geraniol; Geranyl acetate; Eucalyptol; Citronellol; Terpinolene; Citral; Linalool; Limonene; Propan-2-ol.

2.3. Other hazards

Human health hazards : May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Exposure to high vapour concentrations may result in a narcotic effect. Use only as directed. Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
Physical/chemical hazards : Extremely flammable. Keep away from sources of ignition — No smoking. Do not spray on a naked flame or any incandescent material. Do not spray near fire, sources of heat or live electrical equipment. Aerosol may explode from internal pressure build-up when exposed to temperatures exceeding 50 °C.
Environmental hazards : Does not contain PBT or vPvB substances in concentrations higher than 0,1%. Harmful to aquatic life with long lasting effects.
Other information : Keep out of reach of children. Avoid contact with skin. Wear suitable gloves. Caution: Do not breathe spray. Use only in well-ventilated areas. Spray in short intervals for a short period only. Ventilate well after use. Harmful to house pets.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

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3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	REACH nr.	OEL
Butane Flam. Gas 1; Press. Gas H220; H280	25 - < 50	106-97-8	203-448-7	01-2119474691-32	#
Propane Flam. Gas 1; Press. Gas H220; H280	10 - < 20	74-98-6	200-827-9	01-2119486944-21	#
Ethanol Flam. Liq. 2; Eye Irrit. 2 H225; H319	10 - < 20	64-17-5	200-578-6	01-2119457610-43	#
Propan-2-ol Flam. Liq. 2; Eye Irrit. 2; STOT SE 3 H225; H319; H336	5 - < 10	67-63-0	200-661-7	01-2119457558-25	#
Propane-1,2-diol ----- -----	1 - < 5	57-55-6	200-338-0	01-2119456809-23	#
Isobutane Flam. Gas 1; Press. Gas H220; H280	1 - < 5	75-28-5	200-857-2	01-2119485395-27	#
Limonene Flam. Liq. 3; Skin Irrit. 2; Skin Sens. 1B; Asp. Tox. 1; Aquatic Acute 1; Aquatic Chronic 1 H226; H304; H315; H317; H410	1 - < 2,5	5989-27-5	227-813-5	01-2119529223-47	#

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Alpha-terpineol	0,1 - < 1	98-55-5	202-680-6	01-2119980717-23	
Skin Irrit. 2; Eye Irrit. 2 H315; H319					
Linalool	0,1 - < 1	78-70-6	201-134-4	01-2119474016-42	
Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1B H315; H319; H317					
Citral	0,1 - < 1	5392-40-5	226-394-6	01-2119462829-23	#
Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1 H319; H315; H317					
Terpinolene	< 0,1	586-62-9	209-578-0		
Skin Sens. 1B; Asp. Tox. 1; Aquatic Chronic 1; Aquatic Acute 1 H317; H304; H400; H410					
Citronellol	< 0,1	106-22-9	203-375-0	01-2119453995-23	
Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1B H319; H317; H315					
Eucalyptol	< 0,1	470-82-6	207-431-5	01-2119967772-24	
Flam. Liq. 3; Skin Sens. 1B H226; H317					
Geranyl acetate	< 0,1	105-87-3	203-341-5	01-2119973480-35	
Skin Irrit. 2; Skin Sens. 1B; Aquatic Chronic 3 H315; H317; H412					
Geraniol	< 0,1	106-24-1	203-377-1	01-2119552430-49	
Skin Sens. 1; Eye Dam. 1; Skin Irrit. 2 H317; H318; H315					
Alpha-Pinenes	< 0,1	80-56-8	201-291-9	01-2119519223-49	
Flam. Liq. 3; Skin Sens. 1; Asp. Tox. 1; Skin irrit 2 H226; H317; H315; H304					

Reference is made to chapter 16 for full text of each relevant H phrase. Substance(s) with an Occupational Exposure Limit are marked with #. Occupational exposure limit(s) are listed in section 8.

SECTION 4 FIRST AID MEASURES

4.1. Description of first aid measures

First aid measures

- Inhalation : Move victim into fresh air. Consult a doctor if victim feels unwell.
- Skin contact : Take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor if irritation occurs.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Consult a doctor.
- Ingestion : Aerosol/mist: Ingestion is unlikely to occur.

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

Effects and symptoms

- Inhalation : May cause headache, dizziness and a feeling of sickness. May cause irritation to respiratory airways and coughing.
- Skin contact : May cause redness and irritation, sensitisation. May produce an allergic reaction. May cause dry skin and redness.
- Eye contact : Irritant. May cause redness and pain.
- Ingestion : Aerosol/mist: Ingestion is unlikely to occur.

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

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Note to physicians : None known.

SECTION 5 FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Suitable : Carbondioxide (CO₂). Alcohol resistant foam. Dry chemical. Water fog.
Not suitable : Waterjet.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards : Aerosol may explode from internal pressure build-up when exposed to temperatures exceeding 50 °C. Do not expose emergency personnel to overheated aerosol containers. Water may be used to cool container and prevent explosion of the aerosol.

Hazardous thermal decomposition products : Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

Special protective equipment for fire-fighters : Fight a fire where aerosols are involved from a protected position. Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Do not breathe vapours and/or spray. Keep away from sources of ignition — No smoking. Build up of highly flammable gasses involves an explosion risk. Vapours are heavier than air. Build up (of gasses) in low areas involves risk of suffocation.

6.2. Environmental precautions

Environmental precautions : Avoid release of product into sewers, surface water and/or ground water. Waste product should not be allowed to contaminate soil or water.

Other information : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spilled material in containers. Collect cans in an approved container. Do not pierce aerosols. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

Reference to other sections : For guidance on selection of personal protective equipment see section 8. For guidance on disposal of spilled material see section 13.

SECTION 7 HANDLING AND STORAGE

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7.1. Precautions for safe handling

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Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Important: Pressurized container; protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Keep away from sources of ignition — No smoking. Do not spray on a naked flame or any incandescent material. Do not spray near fire, sources of heat or live electrical equipment. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Do not breathe spray. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep frost-free, in a cool (< 35°), dry and well-ventilated place. Protect from sunlight and keep away from heat.

Recommended packaging : Not applicable.

Directive 2012/18/EU : P3a - Flammable aerosols

Qualifying quantity (tonnes) : 150 (net)

- lower-tier

Qualifying quantity (tonnes) : 500 (net)

- upper-tier

7.3. Specific end use(s)

Use : Use only as directed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Occupational exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments
Butane	GB	1450	1810	-
Butane		300	900	MAC RU
Propane	GB	1800	-	-
Ethanol		1920	-	-
Ethanol	GB	260	1900	Mac: NL
Propan-2-ol		999	1250	-
Propane-1,2-diol	GB	474	-	Total Vapour and Particulates
Propane-1,2-diol		79	117	OEL: NO
Isobutane		1900	2400	
Limonene		110	-	MAC: DE, CH, NL
Citral		27	54	OEL: Poland

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Ethanol	Dermal	1900 mg/m ³		10 mg/m ³	343 mg/kg bw/day
	Inhalation				950 mg/m ³
Propan-2-ol	Dermal				888 mg/kg bw/day
	Inhalation				500 mg/m ³
Propane-1,2-diol	Inhalation				168 mg/m ³
	Inhalation				33,3 mg/m ³
Limonene	Dermal		5 mg/kg bw		2,5 mg/kg bw/day
	Inhalation				16,5 mg/m ³

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Citral	Dermal			1,7 mg/kg bw/day
	Inhalation			9 mg/m ³
Terpinolene	Dermal			0,52 mg/kg bw/day
	Inhalation			3,6 mg/m ³
Citronellol	Dermal			45,8 mg/kg bw/day
	Inhalation			161,6 mg/m ³
Eucalyptol	Dermal			2 mg/kg bw/day
	Inhalation			7,05 mg/m ³
Geranyl acetate	Dermal			35,5 mg/kg bw/day
	Inhalation			62,59 mg/m ³
Geraniol	Dermal			12,5 mg/kg bw/day
	Inhalation			161,6 mg/m ³
Alpha-Pinenes	Inhalation			5,98 mg/m ³

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Ethanol	Dermal	950 mg/m ³			206 mg/kg bw/day
	Inhalation				114 mg/m ³
	Oral				87 mg/kg bw/day
Propan-2-ol	Dermal				319 mg/kg bw/day
	Inhalation				89 mg/m ³
	Oral				26 mg/kg bw/day
Propane-1,2-diol	Inhalation			10 mg/m ³	50 mg/m ³
Limonene	Inhalation				8,33 mg/m ³
	Oral				4,76 mg/kg bw/day
Linalool	Dermal		2,5 mg/kg bw	15 mg/kg bw/day	1,25 mg/kg bw/day
	Inhalation		4,1 mg/m ³		0,7 mg/m ³
	Oral		1,2 mg/kg bw		0,2 mg/kg bw/day
Citral	Dermal				1 mg/kg bw/day
	Inhalation				2,7 mg/m ³
	Oral				0,6 mg/kg bw/day
Terpinolene	Dermal				0,26 mg/kg bw/day
	Inhalation				0,9 mg/m ³
	Oral				0,26 mg/kg bw/day
Citronellol	Dermal				27,5 mg/kg bw/day
	Inhalation				47,8 mg/m ³
	Oral				13,75 mg/kg bw/day
Eucalyptol	Dermal				1 mg/kg bw/day
	Inhalation				1,74 mg/m ³
	Oral				600 mg/kg bw/day
Geranyl acetate	Dermal				17,75 mg/kg bw/day
	Inhalation				15,4 mg/m ³
	Oral				8,9 mg/kg bw/day
Geraniol	Dermal				7,5 mg/kg bw/day
	Inhalation				47,8 mg/m ³
	Oral				13,75 mg/kg bw/day
Alpha-Pinenes	Inhalation				1,06 mg/m ³
	Oral				0,31 mg/kg bw/day

Predicted no-effect concentration (PNEC):

Chemical name	Route of exposure	Fresh water	Marine water	
Ethanol	Water	0,96 mg/l	0,79 mg/l	
	Sediment	3,6 mg/kg	2,9 mg/kg	
	Intermittent water			2,75 mg/l
	STP			580 mg/l
	Soil			0,63 mg/kg

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Propan-2-ol	Oral			0,72 mg/kg food
	Water	140,9 mg/l	140,9 mg/l	
	Sediment	552 mg/kg	552 mg/kg	
	Intermittent water			140,9 mg/l
	STP			2251 mg/l
Propane-1,2-diol	Soil			28 mg/kg
	Oral			160 mg/kg food
	Water	260 mg/l	26 mg/l	
	Sediment	572 mg/kg	57,2 mg/kg	
	Intermittent water			183 mg/l
Limonene	STP			20000 mg/l
	Soil			50 mg/kg
	Oral			1133 mg/kg food
	Water	0,0054 mg/l	0,0005 mg/l	
	Sediment	1,32 mg/kg	0,13 mg/kg	
Alpha-terpineol	STP			1,8 mg/l
	Soil			0,262 mg/kg
	Oral			3,33 mg/kg food
	Water	0,068 mg/l	0,0068 mg/l	
	Sediment	1,85 mg/kg	0,185 mg/kg	
Linalool	STP			2,6 mg/l
	Soil			0,329 mg/kg
	Water	0,2 mg/l	0,02 mg/l	
	Sediment	2,22 mg/kg	0,222 mg/kg	
	Intermittent water			2 mg/l
Citral	STP			10 mg/l
	Soil			0,327 mg/kg
	Oral			7,8 mg/kg food
	Water	0,0067 mg/l	0,0006 mg/l	
	Sediment	0,125 mg/kg	0,0125 mg/kg	
Terpinolene	Intermittent water			0,0678 mg/l
	STP			1,6 mg/l
	Soil			0,0209 mg/kg
	Water	0,000634 mg/l	0,000063 mg/l	
	Sediment	0,147 mg/kg	0,0147 mg/kg	
Citronellol	Intermittent water			0,00634 mg/l
	STP			0,2 mg/l
	Soil			0,0291 mg/kg
	Oral			10,31 mg/kg food
	Water	0,0024 mg/l	0,00024 mg/l	
Eucalyptol	Sediment	0,0256 mg/kg	0,00256 mg/kg	
	Intermittent water			0,024 mg/l
	STP			580 mg/l
	Soil			0,00371 mg/kg
	Water	0,057 mg/l	0,0057 mg/l	
Geranyl acetate	Sediment	1,425 mg/kg	0,1425 mg/kg	
	Intermittent water			0,57 mg/l
	STP			10 mg/l
	Soil			0,25 mg/kg
	Oral			133 mg/kg food
Geraniol	Water	0,00372 mg/l	0,000372 mg/l	
	Sediment	0,442 mg/kg	0,442 mg/kg	
	Intermittent water			0,0372 mg/l
	STP			8 mg/l
	Soil			0,0859 mg/kg
Geraniol	Water	0,0108 mg/l	0,0010 mg/l	
	Sediment	0,115 mg/kg	0,0115 mg/kg	
	Intermittent water			0,108 mg/l

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Alpha-Pinenes	STP			0,7 mg/l
	Soil			0,0167 mg/kg
	Water	0,004 mg/l	0,0004 mg/l	
	Sediment	1,033 mg/kg	0,103 mg/kg	
	STP			3,26 mg/l
	Soil			0,539 mg/kg
	Oral			1,35 mg/kg food

8.2. Exposure controls

Engineering measures : Comply with standard precautionary measures for working with chemicals.

Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:

The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.



- Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: butyl. Indication of permeation breakthrough time: not known.
- Respiratory protection : Take care of sufficient ventilation. Wear suitable respiratory protection in case of large scale exposure. Suitable: gas filter type A (brown), class I or higher on e.g. a facemask in accordance with EN 140.
- Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: butyl. ± 0,5 mm. Indication of permeation breakthrough time: not known.
- Eye protection : Wear appropriate safety glasses with side shields, in accordance with EN 166, when there is danger of possible eye contact.
- Thermal hazards : Aerosol may explode from internal pressure build-up when exposed to temperatures exceeding 50 °C.
- Environmental exposure controls : Avoid release of product into surface- and/or ground water. Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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9.1. Information on basic physical and chemical properties

- Appearance : Aerosol.
- Colour : Colourless.
- Odour : Perfumed.
- Odour threshold : Not known.
- pH : Not applicable. Almost waterfree product.
- Solubility in water : Soluble.
- Partition coefficient (n-octanol/water) : Not known.
- Flash point : Not applicable. Not measurable.
- Flammability (solid, gas) : Extremely flammable.
- Auto ignition temperature : Not applicable. Aerosol container explodes before reaching the auto-ignition point.
- Boiling point/boiling range : Not known. Not measurable.
- Melting point/melting range : < 0 °C
- Explosive properties : Pressurised container: May burst if heated.
- Explosion limits (in air) : Not known. Lower explosion limit in air (%): 0,7 (Limonene)
Upper explosion limit in air (%): 19 Ethanol
- Oxidising properties : Not applicable. Does not contain oxidizing substances.
- Decomposition temperature : Not applicable.
- Viscosity (20°C) : Not known.

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Viscosity (40°C) : Not relevant. The product contains < 10% substances having an aspiration hazard.
Vapour pressure (20°C) : 310000Pa
Vapour density (20°C) : > 1 (air = 1)
Relative density (20°C) : 0.621 g/ml
Evaporation rate : Not known. (n-butyl acetate = 1)

SECTION 10 STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : No other hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid : Keep away from sources of ignition and sources of heat. See section 7.

10.5. Incompatible materials

Materials to avoid : Not applicable.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

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11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

Acute toxicity : Calculated LC50: > 10 mg/l. Ingredients of unknown toxicity: < 1 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause damage to organs. Target organ(s): Central nervous system. Effect(s): Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Corrosion/irritation : May cause irritation to respiratory airways and coughing. Not classified - based on available data, the classification criteria are not met.

Sensitisation : Not classified - based on available data, the classification criteria are not met.

Carcinogenicity : Not classified - based on available data, the classification criteria are not met.

Mutagenicity : Not expected to be mutagenic. Not classified - based on available data, the classification criteria are not met.

Skin contact

Acute toxicity : Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.

Corrosion/irritation : Irritant. May cause redness. Prolonged contact may dry out and defat the skin. Not classified - based on available data, the classification criteria are not met.

Sensitisation : May cause sensitisation by skin contact. May produce an allergic reaction.

Mutagenicity : Not expected to be mutagenic. Not classified - based on available data, the classification criteria are not met.

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Eye contact

Corrosion/irritation : Irritant.

Ingestion

- Acute toxicity : Aerosol/mist: Ingestion is unlikely to occur. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause hampered eyesight.
- Corrosion/irritation : Aerosol/mist: Ingestion is unlikely to occur. May cause a feeling of sickness, vomiting and diarrhoea. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Aerosol/mist: Ingestion is unlikely to occur. Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Aerosol/mist: Ingestion is unlikely to occur. Not expected to be mutagenic. Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal	
Ethanol	Skin irritation	Non-irritant	OECD 404	Rabbit	
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium	
	Genotoxicity - in vitro	Not genotoxic	OECD 476		
	NOEL (carcinogenicity, inh.)	13 mg/m3			
	Genotoxicity - in vivo	Not genotoxic	OECD 478	Mouse	
	NOEL (carcinogenicity, oral)	> 4400 mg/kg bw/d		Mouse	
	Eye irritation	Irritant	OECD 405	Rabbit	
	LD50 (oral)	10470 mg/kg bw	OECD 401	Rat	
	NOAEL (development, oral)	6400 mg/kg bw/d			
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig	
	NOAEL (fertility, oral)	20000 mg/kg bw/d	OECD 415	Rat	
	NOAEL (inhalation)	23000 mg/m3		Rat	
	LD50 (dermal)	15800 mg/kg bw	-----	Rabbit	
	NOAEL (oral)	1730 mg/kg bw/d	OECD 408	Rat	
	LC50 (inhalation)	117000 mg/m3	OECD 403	Rat	
	Propan-2-ol	LD50 (oral)	5840 mg/kg bw	OECD 401	Rat
		LC50 (inhalation)	> 25062 mg/m3	OECD 403	Rat
LD50 (dermal)		12800 mg/kg bw	OECD 402	Rabbit	
NOAEL (oral)		870 mg/kg bw/d	-----	Rat	
Genotoxicity - in vitro		Not genotoxic	OECD 476		
NOEL (carcinogenicity, inh.)		12500 mg/m3		Mouse	
Genotoxicity - in vivo		Not genotoxic	OECD 474	Mouse	
NOAEL (inhalation)		12500 mg/m3	OECD 451	Rat	
Mutagenicity		Negative	OECD 471		
Skin sensitisation		Not sensitizing	OECD 406	Guinea pig	
NOEL (carcinogenicity, oral)		Not carcinogenic	OECD 416	Rat	
NOAEL (development, oral)		400 mg/kg bw/d		Rat	
NOAEL (fertility, oral)		407 mg/kg bw/d		Rat	
Eye irritation		Irritant	OECD 405	Rabbit	
Skin irritation		Slightly irritant	OECD 404	Rabbit	
Limonene		NOEL (carcinogenicity) - estimate	Not carcinogenic	-----	-----
		NOEL (carcinogenicity, oral)	> 75 mg/kg bw/d	OECD 451	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3	-----	-----	

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Alpha-terpineol	Genotoxicity - in vivo	> 2000 mg/kg bw/d		Rat
	Eye irritation	Non-irritant	OECD 405	Rabbit
	Mutagenicity	Negative	OECD 471	
	Skin sensitisation	10075 ug/cm2	OECD 429	Mouse
	NOAEL (development, oral)	600 mg/kg bw/d		Rat
	Skin irritation	Irritant	-----	-----
	NOEL (oral)	5 mg/kg bw/d	-----	Rat
	LD50 (dermal)	> 2000 mg/kg bw	-----	Rabbit
	LD50 (oral)	4400 mg/kg bw	-----	Rat
	Genotoxicity - in vitro	Not genotoxic		
	NOAEL (oral)	150 mg/kg bw/d		Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3		
	NOAEL (development) - estimate	250 mg/kg.d	Read across	Rat
	LD50 (dermal)	> 3000 mg/kg bw		Rabbit
	LD50 (oral)	4300 mg/kg bw		Rat
NOAEL (oral) - estimate	250 mg/kg bw/d	Read across	Rat	
Genotoxicity - in vitro	Not genotoxic			
Skin sensitisation - estimate	Not sensitizing	Read across		
Linalool	Mutagenicity - estimate	Not mutagenic	Read across	Salmonella typhimurium
	Skin irritation	Mildly irritant	-----	Human
	LD50 (oral)	2790 mg/kg bw	-----	Rat
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Mouse
	Skin irritation	Irritant	OECD 404	Rabbit
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Skin sensitisation	12650 ug/cm2	OECD 429	Mouse
	NOAEL (fertility, oral)	365 mg/kg bw/d	OECD 421	Rat
	NOAEL (development, oral)	365 mg/kg bw/d	OECD 421	Rat
	LD50 (dermal)	5610 mg/kg bw	OECD 402	Rabbit
	LC50 (inhalation)	> 3200 mg/m3	-----	Mouse
	NOAEL (oral)	117 mg/kg bw/d	OECD 407	Rat
	NOAEL (dermal)	250 mg/kg bw/d	OECD 411	Rat
	Eye irritation	Irritant	OECD 405	Rabbit
	Citral	Skin sensitisation	1414 ug/cm2	OECD 429
NOAEL (development, oral)		200 mg/kg bw/d	OECD 421	Rat
LD50 (dermal)		2250 mg/kg bw	-----	Rabbit
NOAEL (oral)		833 mg/kg bw/d	-----	Rat
Genotoxicity - in vitro		Not genotoxic		
LD50 (oral)		4960 mg/kg bw	-----	Rat
Mutagenicity		Negative	OECD 471	
NOEL (carcinogenicity, oral)		> 100 mg/kg bw/d	OECD 453	Rat
NOAEL (developmental toxicity, inh.)		423 mg/m3	-----	Rat
Skin irritation		Irritant		Human
Skin irritation		Moderately irritant		Rabbit
Eye irritation		Slightly irritant	OECD 405	Rabbit
Genotoxicity - in vivo		Negative	OECD 474	Mouse
NOAEL (fertility, oral)		> 1000 mg/kg bw/d	OECD 421	Rat
Terpinolene		LD50 (dermal)	> 5000 mg/kg bw	
	LD50 (oral)	3860 mg/kg bw		Rat
	LD50 (oral) - estimate	1200 mg/kg bw	Read across	

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	NOEL (carcinogenicity) - estimate	Not carcinogenic		
	NOAEL (fertility) - estimate	> 500 mg/kg.d	Read across	
	NOAEL (development) - estimate	591 mg/kg.d	Read across	
	Mutagenicity - estimate	Not mutagenic	Read across	
	Genotoxicity - in vitro	Not genotoxic		
	NOAEL (oral) - estimate	1200 mg/kg bw/d	Read across	
	Eye irritation	Slightly irritant	OECD 405	Rabbit
	NOAEL (oral)	161,5 mg/kg bw/d	OECD 422	Rat
	Skin irritation	Non-irritant		Rat
	Skin sensitisation	Sensitizing.	OECD 429	Mouse
	Mutagenicity	Negative		
	Genotoxicity - estimate	Not genotoxic	QSAR	-----
	Genotoxicity - in vitro	Not genotoxic		
	Skin sensitisation	10875 ug/cm2	OECD 429	Mouse
	Mutagenicity	Not mutagenic	OECD 471	Salmonella typhimurium
	NOAEL (oral)	> 50 mg/kg bw/d		Rat
	Skin irritation	Moderately irritant		Rabbit
	LD50 (oral)	3450 mg/kg bw	-----	Rat
	LD50 (dermal)	2650 mg/kg bw		Rabbit
	NOAEL (fertility, dermal)	300 mg/kg bw/d	OECD 421	Rat
	NOAEL (developmental toxicity, dermal)	> 300 mg/kg bw/d	OECD 421	Rat
	Skin irritation	Moderately irritant	Patch test	Human
	Eye irritation	Moderately irritant		Rabbit
	LD50 (oral)	2480 mg/kg bw	-----	Rat
	NOAEL (oral)	1200 mg/kg bw/d		Rat
	Genotoxicity - in vitro	Not genotoxic		
	Mutagenicity	Not mutagenic		Salmonella typhimurium
	Skin irritation	Non-irritant		
	Skin sensitisation	Sensitizing.	OECD 429	Mouse
	LD50 (dermal) - estimate	> 2000 mg/kg bw	Read across	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3	-----	-----
	NOEL (carcinogenicity) - estimate	> 2000 mg/kg.d	Read across	Rat
	NOAEL (dermal) - estimate	1000 mg/kg bw/d	Read across	Mouse
	Skin irritation	Severely irritant		Rabbit
	LD50 (dermal)	> 5460 mg/kg bw		Rabbit
	LD50 (oral)	6330 mg/kg bw	-----	Rat
	Mutagenicity	Negative	OECD 471	-----
	Skin sensitisation	Sensitizing.	OECD 429	Mouse
	NOAEL (developmental toxicity, dermal)	> 300 mg/kg bw/d	OECD 421	Rat
	NOAEL (fertility, dermal)	> 300 mg/kg bw/d	OECD 421	Rat
	LD50 (oral)	2100 mg/kg bw	-----	Rat
	LD50 (dermal)	> 5000 mg/kg bw	-----	Rabbit
	NOAEL (oral)	1000 mg/kg bw/d	-----	Rat
	Skin irritation	Irritant	-----	Rabbit
	Eye irritation	Irritant	OECD 405	Rabbit
	Genotoxicity - in vivo	Not genotoxic		Mouse
Citronellol				
Eucalyptol				
Geranyl acetate				
Geraniol				

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Alpha-Pinenes	NOEL (oral)	> 550 mg/kg bw/d	-----	Rat
	Skin sensitisation	3525 ug/cm2	OECD 429	Mouse
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vitro	Not genotoxic	OECD 476	
	NOAEL (oral) - estimate	250 mg/kg bw/d	Read across	
	NOAEL (inhalation)	170 mg/m3	OECD 413	Rat
	LD50 (oral)	3700 mg/kg bw	-----	Rat
	NOAEL (development) - estimate	250 mg/kg.d	Read across	Rat
	Genotoxicity - estimate	Not genotoxic	Read across	
	Eye irritation - estimate	Moderately irritant	Read across	Rabbit
	Mutagenicity	Not mutagenic	-----	Salmonella typhimurium
	LD50 (dermal)	> 5000 mg/kg bw	-----	Rabbit
	Skin irritation	Moderately irritant	-----	Rabbit
	Skin irritation	Non-irritant	-----	Human
Skin sensitisation	Sensitizing.	-----	Guinea pig	

SECTION 12 ECOLOGICAL INFORMATION

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12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Harmful to aquatic organisms. Calculated LC50 (fish): 48 mg/l. Calculated EC50 (waterflea): 28 mg/l. Contains < 1 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence – degradability : May cause long-term adverse effects in the aquatic environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : Contains substances that are potentially bioaccumulating (Log Pow > 3).

12.4. Mobility in soil

Mobility : Not applicable.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment : Does not contain PBT or vPvB substances in concentrations higher than 0,1%.

12.6. Other adverse effects

Other information : Not applicable.

Ecological information:

Chemical name	Property		Method	Test animal
Limonene	LC50 (fish)	0,720 mg/l	OECD 203	Pimephales promelas
	EC50 (waterflea)	0,36 mg/l	OECD 202	Daphnia magna
	NOEC (waterflea) - chronic	0,15 mg/l.d		Daphnia magna
	Ultimate aerobic biodegradation (%)	> 92 %		
	Log P(ow)	4,38		
Terpinolene	BCF	683		
	LC50 (fish)	0,805 mg/l	OECD 203	Brachydanio rerio
	EC50 (waterflea)	0,634 mg/l	OECD 202	Daphnia magna
	IC50 (alga)	0,692 mg/l	OECD 201	Pseudokirchnerella subcapitata

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Geranyl acetate	LC50 (bacteria)	46 mg/l	OECD 209	
	Ultimate aerobic biodegradation (%)	81 %	OECD 301 D	
	Log P(ow)	5,1000		
	EC50 (waterflea)	14,1 mg/l	OECD 202	Daphnia magna
	IC50 (algae)	3,72 mg/l	OECD 201	Desmodesmus subspicatus
	LC50 (fish) - estimate	68 mg/l	Read across	Leuciscus idus
Geraniol	Ultimate aerobic biodegradation (%)	> 70 %		
	Log P(ow)	4,3		
	BCF	235		
	LC50 (fish)	22 mg/l	OECD 203	Brachydanio rerio
	EC50 (waterflea)	10,8 mg/l	OECD 202	Daphnia magna
	IC50 (algae)	13,1 mg/l	OECD 201	Desmodesmus subspicatus
	Ultimate aerobic biodegradation (%)	> 90 %	OECD 301 A	
	Log P(ow)	3,5		

VOC-content (EC) : 614g/l

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Product residues : Recyclable metal container. Do not puncture or burn even after use. Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.
- Additional warning : Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.
- European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.
- Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

14.1. UN number

UN nr. : UN 1950

14.2. UN proper shipping name

UN Proper shipping name

ADG : 1950 AEROSOLS

IMDG : AEROSOLS

IATA : AEROSOLS, flammable

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)

Class : 2
Classification code : 5F
Packaging group : -
Danger label : 2.1

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:

ADG
Class : 2 5F Gases.
Label : 2.1

Other information : Not intended for carriage by inland waterways in tank-vessels.

IMDG (sea)
Class : 2.1
Packaging group : -
EmS (fire / spill) : F - D / S - U
Marine pollutant : No

IATA (air)
Class : 2.1

14.6. Special precautions for user

Other information : Warning: Gases.

EMS Number: : F-D,S-U

Stowage Code : SW1 protected from sources of heat.

: SW22 for AEROSOLS with a maximum capacity of 1 litre: category B. For WASTE AEROSOLS: Category C, clear of living quarters

Segregation Code : SG69 For Aerosols with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2

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

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments. Packaged liquids are not considered bulk.

14.8. Transport / Additional information:

ADG
Limited Quantities (LQ) : 1L
Exempted Quantities (EQ) : Code:E0
Not permitted as Excepted Quantity

Transport Category : 2

Tunnel restriction code : D

IMDG
Limited Quantities (LQ) : 1L
Exempted Quantities (EQ) : Code:E0

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Not permitted as Excepted Quantity

UN "Model Regulation": : UN1950 AEROSOLS,2.1

SECTION 15 REGULATORY INFORMATION

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

Community regulations : Regulation (EC) No 830/2015 (REACH), Regulation (EC) No 1272/2008 (CLP), 75/324/EEC (aerosols) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION

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16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EC) No 830/2015 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

Full text of H-phrases mentioned in section 3:

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.

Full text of hazard classes mentioned in section 3:

Flam. Gas 1	: Flammable gas, category 1.
Press. Gas	: Compressed gas.
Flam. Liq. 2	: Flammable liquid, category 2.
Flam. Liq. 3	: Flammable liquid, hazard category 3.
Flam. Sol. 1	: Flammable solid, category 1.
Acute Tox. 4	: Acute toxicity, category 4.
Skin Corr. 1B	: Skin corrosive, category 1B.
Skin Irrit. 2	: Skin irritation, category 2.
Eye Dam. 1	: Serious eye damage, category 1.
Eye Irrit. 2	: Eye irritation, category 2.
Skin Sens. 1	: Skin sensitization, category 1.
STOT SE 3	: Specific target organ toxicity after single exposure, category 3.
Asp. Tox. 1	: Aspiration hazard, category 1.
Aquatic Chronic 1	: Hazardous to the aquatic environment — Chronic category 1.
Aquatic Chronic 2	: Hazardous to the aquatic environment — Chronic category 2.
Aquatic Chronic 3	: Hazardous to the aquatic environment — Chronic category 3.
Aquatic Acute 1	: Hazardous to the aquatic environment — Acute category 1.

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DNEL	Derived no-effect level
ECETOC TRA	European centre for ecotoxicology and toxicology of chemicals. Targeted risk assessment
EU	European Union
EUSES	European Union System for the Evaluation of Substances
IBC code	Intermediate Bulk Container
LD50 LC50	Lethal Dose/Concentration for 50% of a population
NOAEL	No Observed (Adverse) Effect Level
NOEC	No observed effect concentration
OEL	Occupational exposure limit
PBT	Persistent, Bioaccumulative and Toxic
PC	Chemical product category
PNEC	Predicted no-effect concentration
STP	Sewage Treatment Plant
SU	Sector of Use
SVHC	Substance of very high concern
TWA/STEL	Time-Weighted Average/Short Term Exposure Limit
vPvB	Very Persistent and Very Bioaccumulative

Number format : "," used as decimal separator.