



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

1.1. Product identifier

Product name : ALEFIA REED DIFFUSER MIRABEAU
Product code : ALE-051

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

Application : SU21 Consumer product. PC3 Air care products. Airfreshener.

1.3. Details of the supplier of the safety data sheet

Supplier : Dovox B.V.
Computerweg 3
3542 DP UTRECHT, The Netherlands
Telephone : +31-30-7116 824
Fax : +31-30-3100 141
E-mail : info@dovox.nl
Website : www.dovox.nl

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:

NL - Telephone : +31-30-7116 824

(During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):

(24/7)

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP classification : Flammable liquid, category 3. Hazardous to the aquatic environment — Chronic category 3.
(1272/2008/EC)

Human health hazards : May produce an allergic reaction.
Physical/chemical hazards : Flammable.
Environmental hazards : Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Warning

H- and P-phrases : H226 Flammable liquid and vapour.
H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains ... May produce an allergic reaction. Reference is made to additional labelling for full text of EUH208*.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P501 Dispose of contents/container to an official chemical waste depot.
P273 Avoid release to the environment.

Labelling of packagings where the contents do not exceed 125 ml and it is technically impossible to list all phrases:
Hazard pictograms :



Signal word : Warning

H- and P-phrases : H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains ... May produce an allergic reaction. Reference is made to additional labelling for full text of EUH208*.
P102 Keep out of reach of children.

Additional labelling (for all packaging sizes)

: * Contains d-Limonene ; Linalool ; Cedryl methyl ketone ; Alpha-methyl-1,3-benzodioxole-5-propionaldehyde ; Citronellol ; alpha-Hexylcinnamaldehyde ; 4-tert-butylcyclohexyl acetate ; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8-tetramethyl-2-naphtyl)ethan-1-one ; 2-(4-tert-butylbenzyl)propionaldehyde . May produce an allergic reaction.

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
(2-Methoxymethylethoxy)propanol	50 - 75	34590-94-8	252-104-2	MAC	
Ethanol	10 - < 20	64-17-5	200-578-6		
Oxydipropanol	1 - < 5	25265-71-8	246-770-3	MAC	
d-Limonene	0,25 - < 1	5989-27-5	227-813-5		01-2119529223-47
Linalool	0,1 - < 1	78-70-6	201-134-4		01-2119474016-42
Cedryl methyl ketone	0,25 - < 1	32388-55-9	251-020-3		01-2119969651-28
Alpha-methyl-1,3-benzodioxole-5-propionaldehyde	0,1 - < 1	1205-17-0	214-881-6		01-2120740119-58
Benzyl acetate	0,1 - < 1	140-11-4	205-399-7		01-2119638272-42
Citronellol	0,1 - < 1	106-22-9	203-375-0		01-2119453995-23
alpha-Hexylcinnamaldehyde	0,1 - < 1	101-86-0	202-983-3		01-2119533092-50
4-tert-butylcyclohexyl acetate	0,1 - < 1	32210-23-4	250-954-9		01-2119976286-24
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8-tetramethyl-2-naphtyl)ethan-1-one	0,25 - < 1	54464-57-2	259-174-3		01-2119489989-04
(Z)-3-hexenyl salicylate	0,25 - < 1	65405-77-8	265-745-8		01-2119987320-37
2-(4-tert-butylbenzyl)propionaldehyde	0,1 - < 1	80-54-6	201-289-8		01-2119485965-18

Substance name	Hazard Class	H-phrases	Pictograms	
(2-Methoxymethylethoxy)propanol	----	----	----	
Ethanol	Flam. Liq. 2; Eye Irrit. 2	H225; H319	GHS02; GHS07	H319 : C >= 50 %
Oxydipropanol	----	----	----	



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According to Regulation (EU) No 2015/830

d-Limonene	Flam. Liq. 3; Asp. Tox. 1; Skin Irrit. 2; Skin Sens. 1B; Aquatic Acute 1; Aquatic Chronic 1	H226; H304; H315; H317; H400; H410	GHS02; GHS07; GHS08; GHS09	M (acute) = 1
Linalool	Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1B	H315; H317; H319	GHS07	
Cedryl methyl ketone	Skin sens. 1B; Aquatic Acute 1; Aquatic Chronic 1	H317; H400; H410	GHS07; GHS09	M (acute) = 1
Alpha-methyl-1,3-benzodioxole-5-propionaldehyde	Skin Sens. 1B; Aquatic Chronic 2	H317; H411	GHS07; GHS09	
Benzyl acetate	Aquatic Chronic 3	H412	----	
Citronellol	Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1B	H319; H317; H315	GHS07	
alpha-Hexylcinnamaldehyde	Skin Sens. 1B; Aquatic Acute 1; Aquatic Chronic 2	H317; H400; H411	GHS07; GHS09	M (acute) = 1
4-tert-butylcyclohexyl acetate	Skin Sens. 1B	H317	GHS07	
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	Skin Irrit. 2; Skin Sens. 1B; Aquatic Chronic 1	H315; H317; H410	GHS07; GHS09	M (chronic) = 1
(Z)-3-hexenyl salicylate	Aquatic Acute 1; Aquatic Chronic 1	H400; H410	GHS09	M (acute) = 1 M (chronic) = 1
2-(4-tert-butylbenzyl)propionaldehyde	Aquatic Chronic 2; Skin Irrit. 2; Skin Sens. 1B; Acute Tox. 4; Repr. 2	H302; H315; H317; H411; H361f	GHS07; GHS08; GHS09	

Occupational exposure limit(s), if relevant, are listed in section 8.

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES

4.1. Description of first aid measures

First aid measures

- Inhalation : Not applicable under normal conditions of use. 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. Remove contact lenses. Consult a doctor if irritation persists.
- Ingestion : Do not induce vomiting. Do rinse the mouth. Give one glass of water. Never give anything by mouth to an unconscious person. Consult a doctor if victim feels unwell.

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

Effects and symptoms

- Inhalation : No specific effects and/or symptoms are known.
- Skin contact : May produce an allergic reaction. May cause dry skin.
- Eye contact : May cause stinging of eyes and redness.
- Ingestion : May cause a feeling of sickness, vomiting and diarrhoea.

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

Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES



5.1. Extinguishing media

Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

- Special exposure hazards : None known.
Hazardous thermal decomposition products : Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

- Special protective equipment for fire-fighters : 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. Keep away from sources of ignition — No smoking. 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. In case of large spills: contain with dike. 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. Absorb residues in sand or other inert material. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

- Reference to other sections : See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

- Handling : Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Avoid contact with skin and eyes. Avoid splashing. Wear protective clothing.

7.2. Conditions for safe storage, including any incompatibilities

- Storage : Keep in a cool, dry and well-ventilated place (< 35 °C). Keep away from oxidizing agents. Protect from sunlight.
Recommended packaging : Keep only in the original container.
Non recommended packaging : Steel (except stainless steel).



SAFETY DATA SHEET

According to Regulation (EU) No 2015/830

7.3. Specific end use(s)

Use : Use only as directed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments	Source
(2-Methoxymethylethoxy)propanol	GB	308	-	Skin	
(2-Methoxymethylethoxy)propanol	EC	308	-	Skin	
Ethanol	GB	1920	-	-	
Ethanol		260	1900	-	Mac: NL
Oxydipropanol		67	-	-	MAC: DE
d-Limonene		110	-	-	MAC: DE, CH, NL
Benzyl acetate		5	-	-	MAC: LT

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
(2-Methoxymethylethoxy)propanol	Dermal	1900 mg/m3			65 mg/kg bw/day
	Inhalation				310 mg/m3
Ethanol	Dermal				343 mg/kg bw/day
	Inhalation				950 mg/m3
Oxydipropanol	Dermal	1900 mg/m3			84 mg/kg bw/day
	Inhalation				238 mg/m3
d-Limonene	Inhalation				33,3 mg/m3
Linalool	Dermal				5 mg/kg bw
	Inhalation	1900 mg/m3	5 mg/kg bw 16,5 mg/m3		2,5 mg/kg bw/day
Cedryl methyl ketone	Dermal				2,8 mg/m3
	Inhalation				0,33 mg/kg bw/day
	Inhalation				1,175 mg/m3
Benzyl acetate	Dermal	1900 mg/m3	12,5 mg/kg bw 43,8 mg/m3		6,25 mg/kg bw/day
	Inhalation				21,9 mg/m3
Citronellol	Dermal				45,8 mg/kg bw/day
	Inhalation				161,6 mg/m3
alpha-Hexylcinnamaldehyde	Dermal	0,525 mg/kg bw 6,28 mg/m3		0,525 mg/kg bw/day	18,2 mg/kg bw/day
	Inhalation				0,078 mg/m3
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphtyl)ethan-1-one	Dermal				1,73 mg/kg bw/day
	Inhalation				1,76 mg/m3
(Z)-3-hexenyl salicylate	Dermal	0,41 mg/kg bw 0,29 mg/m3	20 mg/kg bw 0,29 mg/m3	0,048 mg/m3	0,9 mg/kg bw/day
	Inhalation				1,59 mg/m3
2-(4-tert-butylbenzyl)propionaldehyde	Dermal				3,33 mg/kg bw/day
	Inhalation				0,048 mg/m3

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term	DNEL, long-term
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SAFETY DATA SHEET

According to Regulation (EU) No 2015/830

		Local effect	Systemic effect	Local effect	Systemic effect
(2-Methoxymethylethoxy)propanol	Dermal				15 mg/kg bw/day
	Inhalation				37,2 mg/m3
	Oral				1,67 mg/kg bw/day
Ethanol	Dermal				206 mg/kg bw/day
	Inhalation	950 mg/m3			114 mg/m3
	Oral				87 mg/kg bw/day
Oxydipropanol	Dermal				51 mg/kg bw/day
	Inhalation				70 mg/m3
	Oral				24 mg/kg bw/day
d-Limonene	Inhalation				8,33 mg/m3
	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/m3		0,7 mg/m3
	Oral		1,2 mg/kg bw		0,2 mg/kg bw/day
Cedryl methyl ketone	Dermal				0,166 mg/kg bw/day
	Inhalation				0,289 mg/m3
	Oral				0,166 mg/kg bw/day
Benzyl acetate	Dermal		6,25 mg/kg bw		3,125 mg/kg bw/day
	Inhalation		11 mg/m3		5,5 mg/m3
	Oral		6,25 mg/kg bw		3,125 mg/kg bw/day
Citronellol	Dermal				27,5 mg/kg bw/day
	Inhalation				47,8 mg/m3
	Oral				13,75 mg/kg bw/day
alpha-Hexylcinnamaldehyde	Dermal	0,0787 mg/kg bw		0,0787 mg/kg bw/day	9,11 mg/kg bw/day
	Inhalation	4,71 mg/m3			0,019 mg/m3
	Oral				0,056 mg/kg bw/day
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	Dermal	0,0506 mg/kg bw			0,86 mg/kg bw/day
	Inhalation				0,43 mg/m3
	Oral				0,25 mg/kg bw/day
(Z)-3-hexenyl salicylate	Dermal				0,45 mg/kg bw/day
	Inhalation				0,39 mg/m3
	Oral				0,23 mg/kg bw/day
2-(4-tert-butylbenzyl)propionaldehyde	Dermal	0,41 mg/kg bw	20 mg/kg bw		1,67 mg/kg bw/day
	Inhalation	0,07 mg/m3	0,07 mg/m3	0,012 mg/m3	0,012 mg/m3
	Oral		0,041 mg/kg bw		0,007 mg/kg bw/day

Predicted no-effect concentration (PNEC):

Chemical name	Route of exposure	Fresh water	Marine water	
(2-Methoxymethylethoxy)propanol	Water	19 mg/l	1,9 mg/l	
	Sediment	70,2 mg/kg	7,02 mg/kg	
	Intermittent water			190 mg/l
	STP			4168 mg/l
	Soil			2,74 mg/kg
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
	Oral			0,72 mg/kg food
Oxydipropanol	Water	0,1 mg/l	0,01 mg/l	
	Sediment	0,238 mg/kg	0,0238 mg/kg	
	Intermittent water			1 mg/l



SAFETY DATA SHEET

According to Regulation (EU) No 2015/830

d-Limonene	STP			1000 mg/l
	Soil			0,0253 mg/kg
	Oral			313 mg/kg food
	Water	0,0054 mg/l	0,0005 mg/l	
Linalool	Sediment	1,32 mg/kg	0,13 mg/kg	
	STP			1,8 mg/l
	Soil			0,262 mg/kg
	Oral			3,33 mg/kg food
Benzyl acetate	Water	0,2 mg/l	0,02 mg/l	
	Sediment	2,22 mg/kg	0,222 mg/kg	
	Intermittent water			2 mg/l
	STP			10 mg/l
Citronellol	Soil			0,327 mg/kg
	Oral			7,8 mg/kg food
	Water	0,004 mg/l	0,0004 mg/l	
	Sediment	0,114 mg/kg	0,0114 mg/kg	
alpha-Hexylcinnamaldehyde	Intermittent water			0,04 mg/l
	STP			8,55 mg/l
	Soil			0,0205 mg/kg
	Water	0,0024 mg/l	0,00024 mg/l	
4-tert-butylcyclohexyl acetate	Sediment	0,0256 mg/kg	0,00256 mg/kg	
	Intermittent water			0,024 mg/l
	STP			580 mg/l
	Soil			0,00371 mg/kg
(Z)-3-hexenyl salicylate	Water	0,03 mg/l	0,003 mg/l	
	Sediment	47,7 mg/kg	4,77 mg/kg	
	Intermittent water			0,03 mg/l
	STP			10 mg/l
2-(4-tert-butylbenzyl)propionaldehyde	Soil			9,51 mg/kg
	Oral			6,6 mg/kg food
	Water	0,0053 mg/l	0,00053 mg/l	
	Sediment	2,01 mg/kg	0,21 mg/kg	
	Intermittent water			0,053 mg/l
	STP			12,2 mg/l
	Soil			0,42 mg/kg
	Oral			66,76 mg/kg food
	Water	0,00061 mg/l	0,000061 mg/l	
	Sediment	0,11 mg/kg	0,011 mg/kg	
	Intermittent water			0,0061 mg/l
	STP			10 mg/l
	Soil			0,0217 mg/kg
	Oral			40 mg/kg food
	Water	0,0020 mg/l	0,0002 mg/l	
	Sediment	0,0584 mg/kg	0,0058 mg/kg	
	Intermittent water			0,0204 mg/l
	STP			1,049 mg/l
	Soil			0,0463 mg/kg

8.2. Exposure controls

Engineering measures : Comply with standard precautionary measures for working with chemicals. See Directive 2004/37/EG on the protection of workers from the risks related to exposure to carcinogens or mutagens at work.

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 : Use of specific protective industrial clothing is not required under normal conditions of use. In case of large scale exposure wear suitable protective clothing, overalls or suit, and similar boots. Suitable material: nitril. Indication of permeation breakthrough time: 6 hours.
- 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 : Under normal conditions of use specific gloves are not required. Wear appropriate gloves in case of frequent or prolonged use and in case of large scale exposure. Suitable material: nitril. $\pm 0,5$ mm. Indication of permeation breakthrough time: 6 hours.
- Eye protection : Wear appropriate safety glasses when there is danger of possible eye contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	: Liquid.	
Colour	: Colourless.	
Odour	: Perfumed.	
Odour threshold	: Not known.	
pH	: 2 - 11,5	
Solubility in water	: Dispersible.	
Partition coefficient (n-octanol/water)	: Not known.	Not measured. Not relevant for mixtures.
Flash point	: 37 °C	Closed Cup (ISO 2719, EN 11, DIN 51758, ASTM D 93)
Flammability (solid, gas)	: Not applicable.	Liquid. See flashpoint.
Auto ignition temperature	: > 207 °C	
Boiling point/boiling range	: 78 °C	
Melting point/melting range	: < -20 °C	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (% in air)	: Not known.	Lower explosion limit in air (%): 1,1 (2-Methoxymethylethoxy)propanol)
		Upper explosion limit in air (%): 19 Ethanol
Oxidising properties	: Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	: Not known.	
Viscosity (20°C)	: 1 mm ² /sec	(1 mm ² /sec = 1cSt)
Viscosity (40°C)	: Not relevant.	The product contains < 10% substances having an aspiration hazard.
Vapour pressure (20°C)	: > 2300 Pa	
Vapour density (20°C)	: > 1	(air = 1)
Relative density (20°C)	: 1 g/ml	
Evaporation rate	: < 1	(n-butyl acetate = 1)

9.2. Other information

Other information : Not relevant.

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 : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: > 5,302 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.
- Corrosion/irritation : Not classified - based on available data, the classification criteria are not met.
- Sensitisation : Does not contain substances classified as respiratory sensitiser. 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 : Does not contain mutagenic substances. 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 : Slight irritation possible. Not classified - based on available data, the classification criteria are not met.
- Sensitisation : May produce an allergic reaction.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Eye contact

- Corrosion/irritation : Slight irritation possible. Not classified - based on available data, the classification criteria are not met.

Ingestion

- 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. May cause hampered eyesight.
- Aspiration : Not expected to be an aspiration hazard. Contains a substance/substances with an aspiration hazard. Not classified - based on available data, the classification criteria are not met.
- Corrosion/irritation : May cause a feeling of sickness, vomiting and diarrhoea.
- Carcinogenicity : Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.
- Reprotoxicity : Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:



SAFETY DATA SHEET

According to Regulation (EU) No 2015/830

Chemical name	Property		Method	Test animal
d-Limonene	Genotoxicity - in vivo	> 2000 mg/kg bw/d		Rat
	NOEL (carcinogenicity, oral)	> 300 mg/kg bw/d	OECD 451	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	-----	-----
	LD50 (dermal)	> 2000 mg/kg bw	-----	Rabbit
	LD50 (oral)	4400 mg/kg bw	-----	Rat
	Genotoxicity - in vitro	Not genotoxic		
Linalool	NOAEL (oral)	150 mg/kg bw/d		Rat
	NOAEL (development, oral)	365 mg/kg bw/d	-----	Rat
	Eye irritation	Non-irritant	OECD 405	Rabbit
	Skin sensitisation	12650 ug/cm2	OECD 429	Mouse
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	NOAEL (fertility, oral)	500 mg/kg bw/d		Rat
	Skin irritation	Irritant	OECD 404	Rabbit
	NOAEL (dermal)	250 mg/kg bw/d	OECD 411	Rat
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Mouse
	LD50 (dermal)	5610 mg/kg bw	-----	Rabbit
Cedryl methyl ketone	Skin irritation	Mildly irritant	-----	Human
	LD50 (oral)	2790 mg/kg bw	-----	Rat
	NOAEL (oral)	117 mg/kg bw/d	-----	Rat
	NOAEL (fertility, oral)	50 mg/kg bw/d	-----	Rat
	NOAEL (development, oral)	100 mg/kg bw/d	-----	Rat
	LD50 (dermal)	> 2000 mg/kg bw	-----	Rabbit
	LD50 (oral)	5000 mg/kg bw	-----	Rat
	Skin irritation	Non-irritant		
	LD50 (dermal)	> 2000 mg/kg bw	-----	Rabbit
	LD50 (oral)	3600 mg/kg bw	-----	Rat
Alpha-methyl-1,3-benzodioxole-5-propionaldehyde	Skin irritation	Non-irritant		
	LD50 (dermal)	> 2000 mg/kg bw	-----	Rabbit
	LD50 (oral)	3600 mg/kg bw	-----	Rat
	Skin irritation	Non-irritant		
	NOAEL (development, oral)	> 500 mg/kg bw/d		Rat
	NOAEL (dermal)	> 300 mg/kg bw/d	-----	Rat
	Skin sensitisation	4100 ug/cm2	OECD 429	-----
	Genotoxicity - in vitro	Not genotoxic		
	Skin sensitisation	10875 ug/cm2	OECD 429	Mouse
	Mutagenicity	Not mutagenic	OECD 471	Salmonella typhimurium
Citronellol	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
	NOAEL (development, oral)	100 mg/kg bw/d	OECD 421	Rat
alpha-Hexylcinnamaldehyde				

4-tert-butylcyclohexyl acetate	Genotoxicity - in vivo	Not genotoxic	OECD 474	Salmonella typhimurium
	Genotoxicity - in vitro	Not genotoxic	OECD 476	
	Mutagenicity	Negative	OECD 471	
	Eye irritation	Non-irritant		Rabbit
	NOAEL (oral) - estimate	30 mg/kg bw/d	Read across	Rat
	LD50 (dermal)	> 3000 mg/kg bw	OECD 402	Rabbit
	LC50 (inhalation)	> 5000 mg/m3	OECD 403	Rat
	LD50 (oral)	> 2450 mg/kg bw	OECD 401	Rat
	Skin sensitisation	2372 ug/cm2	OECD 429	Mouse
	Skin irritation	Moderately irritant	OECD 404	Rabbit
	NOAEL (dermal)	25 mg/kg bw/d		Rat
	LD50 (oral)	5000 mg/kg bw	-----	Rat
	LD50 (dermal)	> 5000 mg/kg bw		Rabbit
	Eye irritation	Non-irritant		Rabbit
	Skin irritation	Non-irritant		Rabbit
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8-tetramethyl-2-naphthyl)ethan-1-one	NOAEL (oral) - estimate	710 mg/kg bw/d	Read across	
	Skin irritation	Non-irritant	-----	Rabbit
	Skin sensitisation	6825 ug/cm2	OECD 429	Mouse
	LD50 (oral)	> 5000 mg/kg bw	-----	Rat
	LD50 (dermal)	> 5000 mg/kg bw	-----	Rat
	Mutagenicity	Not mutagenic	OECD 471	-----
	NOAEL (development, oral)	480 mg/kg bw/d	OECD 414	Rat
	Mutagenicity	Negative	OECD 471	-----
	Skin sensitisation	2372 ug/cm2	OECD 429	Mouse
	LD50 (oral)	1390 mg/kg bw	-----	Rat
2-(4-tert-butylbenzyl)propionaldehyde	LD50 (dermal)	> 5000 mg/kg bw	-----	Rabbit
	Skin irritation	Irritant	OECD 404	Rabbit
	Eye irritation	Non-irritant	-----	Rabbit
	NOAEL (oral)	25 mg/kg bw/d	-----	Rat
	Genotoxicity - in vivo	Negative	OECD 474	Mouse
	NOAEL (fertility, oral)	25 mg/kg bw/d		Rat
	NOAEL (development, oral)	4 mg/kg bw/d	OECD 414	Rat

SECTION 12 ECOLOGICAL INFORMATION

12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Harmful to aquatic organisms. Calculated LC50 (fish): 19 mg/l. Calculated EC50 (waterflea): 9 mg/l.
Contains 0 % 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 bioaccumulating substances.

12.4. Mobility in soil

Mobility : Spilled product can penetrate into the ground and get into the surface water and ground water.



12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Other adverse effects

Other information : Not applicable.

Ecological information:

Chemical name	Property		Method	Test animal
d-Limonene	LC50 (fish)	0,720 mg/l	OECD 203	Pimephales promelas
	EC50 (waterflea)	0,36 mg/l	OECD 202	Daphnia magna
	Ultimate aerobic biodegradation (%)	> 92 %		
	NOEC (waterflea) - chronic	0,15 mg/l.d		Daphnia magna
	Log P(ow)	4,38		
Cedryl methyl ketone	IC50 (algae)	2,80 mg/l	OECD 201	Algae
	EC50 (waterflea)	0,86 mg/l	OECD 202	Daphnia magna
	LC50 (fish)	2,3 mg/l	OECD 203	Pimephales promelas
	NOEC (waterflea) - chronic	0,087 mg/l.d	OECD 211	Daphnia magna
	Log P(ow)	5,6		
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	EC50 (waterflea)	1,38 mg/l	OECD 202	-----
	IC50 (algae)	> 2,6 mg/l	OECD 201	-----
	LC50 (fish)	1,3 mg/l	OECD 203	-----
	Log P(ow)	5,23		
	BCF	600		
(Z)-3-hexenyl salicylate	Ultimate aerobic biodegradation (%)	89 %	OECD 301 F	
	LC50 (fish) - estimate	1,13 mg/l		Brachydanio rerio
	EC50 (waterflea)	3,7 mg/l	OECD 202	Daphnia magna
	IC50 (algae)	0,61 mg/l	OECD 201	Desmodesmus subspicatus
	Log P(ow)	4,57		

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product residues : 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.

Waste water discharge : Do not dispose into the environment, in drains or in water courses.

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 1170

14.2. UN proper shipping name

Transport name : ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
 Transport name (IMDG, IATA) : ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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

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

Class : 3
 Classification code : F1
 Packaging group : III
 Danger label : 3
 Tunnel restriction code : D/E



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

IMDG (sea)

Class : 3
 Packaging group : III
 EmS (fire / spill) : F - E / S - D
 Marine pollutant : No

IATA (air)

Class : 3

14.6. Special precautions for user

Other information : Country specific variations may apply. It is possible that a "Limited Quantity" exemption applies to the transport of this product.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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.

SECTION 15 REGULATORY INFORMATION

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

Community regulations : Regulation (EU) No 2015/830 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION

16.1. Other information



The information in this safety data sheet is compiled in compliance with Regulation (EU) No 2015/830 dated 28 May 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 (*).

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

ADR	: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	: Acute Toxicity Estimate
CLP	: Classification, Labeling & Packaging
CMR	: Carcinogenic, Mutagenic or toxic for Reproduction
EEC	: European Economic Community
GHS	: Globally Harmonized System of Classification and Labelling of Chemicals
IATA	: International Air Transport Association
IBC code	: International Bulk Chemical Code
IMDG	: International Maritime Dangerous Goods Code
LD50/LC50	: Lethal Dose/Concentration for 50% of a population
MAC	: Maximum Allowable Concentration
MARPOL	: International Convention for the Prevention of Pollution From Ships
NO(A)EL	: No Observed (Adverse) Effect Level
OECD	: Organisation for Economic Co-operation and Development
PBT	: Persistent, Bioaccumulative and Toxic
PC	: Chemical product category
PT	: Product type
REACH	: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	: Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	: Sewage Treatment Plant
SU	: Sector of Use
TWA/STEL	: Time-Weighted Average/Short Term Exposure Limit
UN	: United Nations
VOC	: Volatile Organic Compounds
vPvB	: Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008:

Flam. Liq. 3	: On basis of test data.
Aquatic Chronic 3	: Calculation method.

Full text of hazard classes mentioned in section 3:

Flam. Liq. 2	: Flammable liquid, category 2.
Flam. Liq. 3	: Flammable liquid, category 3.
Acute Tox. 4	: Acute toxicity, category 4.
Skin Irrit. 2	: Skin irritation, category 2.
Eye Irrit. 2	: Eye irritation, category 2.
Skin Sens. 1/1A/1B	: Skin sensitization, category 1/1A/1B.
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.

Full text of H-phrases mentioned in section 3:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.



SAFETY DATA SHEET

According to Regulation (EU) No 2015/830

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Number format : ", " used as decimal separator.

End of safety data sheet.