## SAFETY DATA SHEET



### **Fragrance 49385214**

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

1.1 Product identifier

**Product code** : Fragrance 49385214 **Product name** : LEMON VERBENA AFL

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

Fragrance. Restricted to professional users. Industrial use only.

1.3 Details of the supplier of the safety data sheet

Supplier's details : drom fragrances GmbH & Co. KG

> Oberdiller Straße 18 tel. +49 89 74425-0 fax. +49 89 7934966 D-82065 Baierbrunn

e-mail address of person responsible for this SDS

: safety@drom.com

1.4 Emergency telephone number

**National advisory body/Poison Center** 

Telephone number : www.rshm.gov.tr

**Supplier** 

**Emergency telephone** number (with hours of

operation)

: +49 89 74425 288

9h - 17h (Mo - Fr)

### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Repr. 2, H361f (Fertility) Aquatic Chronic 2, H411

#### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Xi: R38

R43 N; R51/53

**Human health hazards** : Irritating to skin. May cause sensitization by skin contact.

**Environmental hazards** : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

See Section 16 for the full text of the R phrases or H statements declared above. See Section 11 for more detailed information on health effects and symptoms.

#### 2.2 Label elements

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01



### **SECTION 2: Hazards identification**

Hazard pictograms







Signal word : Warning

**Hazard statements** : H319 - Causes serious eye irritation.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction. H361f - Suspected of damaging fertility.

H411 - Toxic to aquatic life with long lasting effects.

**Precautionary statements** 

**Prevention**: P201 - Obtain special instructions before use.

P280 - Wear protective gloves. Wear eye or face protection.

P273 - Avoid release to the environment.

Response : P308 + P313 - IF exposed or concerned: Get medical attention.

P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional,

national and international regulations.

Hazardous ingredients : citra

1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one

dipentene

2-(4-tert-butylbenzyl)propionaldehyde

nerol geraniol

α-methyl-1,3-benzodioxole-5-propionaldehyde 2,4-dimethylcyclohex-3-ene-1-carbaldehyde

pin-2(10)-ene pin-2(3)-ene cineole

Supplemental label

elements

Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

: None known.

### **SECTION 3: Composition/information on ingredients**

3.1 Substances : Not applicable.

3.2 Mixtures : Mixture

			<u>Cla</u>	<u>ssification</u>	
Product/ingredient name	Identifiers	%	67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	Туре
citral	REACH #: 01-2119462829-23 EC: 226-394-6 CAS: 5392-40-5 Index: 605-019-00-3	14.01	Xi; R38 R43	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317	[1]
1-(1,2,3,4,5,6,7, 8-octahydro-2,3,8, 8-tetramethyl- 2-naphthyl)ethan-1-one	REACH #: 01-2119489989-04 EC: 915-730-3 CAS: 54464-57-2 CAS: 68155-66-8 CAS: 68155-67-9	10.00	Xi; R38 R43 N; R51/53	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 1, H410	[1]

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 2/23

# drom

### Fragrance 49385214

#### SECTION 3: Composition/information on ingredients REACH #: 6.22 Xi: R38 Skin Irrit. 2, H315 [1] linalool 01-2119474016-42 EC: 201-134-4 Eye Irrit. 2, H319 CAS: 78-70-6 4.19 [1] dipentene EC: 205-341-0 R10 Flam. Liq. 3, H226 EC: 231-732-0 Xn: R65 Skin Irrit. 2, H315 CAS: 138-86-3 Xi: R38 Skin Sens. 1B, H317 CAS: 7705-14-8 Asp. Tox. 1, H304 R43 Index: 601-029-00-7 N; R50/53 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 4.00 [1] linalyl acetate REACH #: Xi; R38 Skin Irrit. 2, H315 01-2119454789-19 EC: 204-116-4 Eye Irrit. 2, H319 CAS: 115-95-7 2-(4-tert-butylbenzyl) REACH #: 3.00 Repr. Cat. 3; R62 Acute Tox. 4, H302 [1] propionaldehyde 01-2119485965-18 EC: 201-289-8 Skin Irrit. 2, H315 Xn; R22 CAS: 80-54-6 Xi; R38 Skin Sens. 1B, H317 R43 Repr. 2, H361f (Fertility) N; R51/53 Aquatic Chronic 2, H411 [1] nerol EC: 203-378-7 2.52 Xi: R38 Skin Irrit. 2, H315 CAS: 106-25-2 R43 Eve Irrit. 2, H319 Skin Sens. 1B, H317 2.00 [1] 2,6-dimethyloct-7-en-REACH #: Xi; R38 Skin Irrit. 2, H315 2-ol 01-2119457274-37 EC: 242-362-4 Eye Irrit. 2, H319 CAS: 18479-58-8 1.61 [1] geraniol REACH #: Xi; R41, R38 Skin Irrit. 2, H315 01-2119552430-49 EC: 203-377-1 R43 Eye Dam. 1, H318 CAS: 106-24-1 Skin Sens. 1, H317 α-methyl-1,3-EC: 214-881-6 1.00 R43 Skin Sens. 1B, H317 [1] benzodioxole-5-CAS: 1205-17-0 N; R51/53 Aquatic Chronic 2, H411 propionaldehyde 0.20 [1] [2] 2,6-di-tert-butyl-p-REACH #: N; R50/53 Aquatic Acute 1, H400 cresol 01-2119555270-46 EC: 204-881-4 Aquatic Chronic 1, H410 CAS: 128-37-0 See Section 16 for See Section 16 for the full text of the H the full text of the Rphrases declared statements declared above. above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

#### **Type**

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

Hydrocarbon. (Content) : \$\overline{\pi} 71\%

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 3/23



### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of first-aiders** 

: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact**: Causes skin irritation. May cause an allergic skin reaction.

**Ingestion** : Irritating to mouth, throat and stomach.

Over-exposure signs/

**symptoms** 

: Not available.

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

### **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing** 

media

: None known.

#### 5.2 Special hazards arising from the substance or mixture

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 4/23



### **SECTION 5: Firefighting measures**

Hazards from the substance or mixture

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

 Decomposition products may include the following materials: carbon dioxide carbon monoxide

#### 5.3 Advice for firefighters

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## **6.2 Environmental precautions**

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

#### 6.3 Methods and materials for containment and cleaning up

**Small spill** 

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

## 6.4 Reference to other sections

See Section 1 for emergency contact information.
 See Section 8 for information on appropriate personal protective equipment.
 See Section 13 for additional waste treatment information.

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 5/23



### **SECTION 7: Handling and storage**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 7.1 Precautions for safe handling

#### **Protective measures**

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

## Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

#### Seveso II Directive - Reporting thresholds (in tonnes)

### **Danger criteria**

	Notification and MAPP threshold	Safety report threshold
E2: Hazardous to the aquatic environment - Chronic 2 C9ii: Toxic for the environment	200 200	500 500

#### 7.3 Specific end use(s)

**Recommendations**: Industrial use only.

### **SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
2,6-di-tert-butyl-p-cresol	NIOSH REL (United States, 10/2013). TWA: 10 mg/m³ 10 hours.

#### **DNELs/DMELs**

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 6/23



## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
citral	DNEL	Long term Inhalation	9 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	1.7 mg/kg	Workers	Systemic
	DNEL	Long term Dermal	0.14 mg/ cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	2.7 mg/m³	Consumers	Systemic
	DNEL	Long term Dermal	1 mg/kg	Consumers	Systemic
	DNEL	Long term Oral	0.6 mg/kg	Consumers	Systemic
	DNEL	Long term Dermal	0.14 mg/ cm <sup>2</sup>	Consumers	Local
1-(1,2,3,4,5,6,7,8-octahydro-2,3,8, 8-tetramethyl-2-naphthyl)ethan- 1-one	DNEL	Long term Dermal	0.1011 mg/ cm <sup>2</sup>	Workers	Local
	DNEL	Long term Inhalation	1.76 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	1.73 mg/ kg bw/day	Workers	Systemic
linalool	DNEL	Long term Dermal	2.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	2.8 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	15 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Short term Dermal	15 mg/cm²	Workers	Local
	DNEL	Long term Dermal	1.25 mg/ kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	0.7 mg/m³	Consumers	Systemic
	DNEL	Long term Oral	0.2 mg/kg bw/day	Consumers	Systemic
	DNEL	Short term Dermal	15 mg/cm²	Consumers	Local
	DNEL	Short term Dermal	2.5 mg/cm <sup>2</sup>	Consumers	Systemic
	DNEL	Short term Inhalation	4.1 mg/m³	Consumers	Systemic
	DNEL	Short term Oral	1.2 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	15 mg/cm <sup>2</sup>	Consumers	Local
	DNEL	Short term Dermal	5 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	16.5 mg/m³	Workers	Systemic

Date of issue/Date of revision: 2015-06-03.Date of printing: 2015-06-03.Version: 1.017/23



## SECTION 8: Exposure controls/personal protection

Long term Inhalation	2.75 mg/m <sup>3</sup>	Workers	Systemic
Long term Dermal	2.5 mg/kg bw/day	Workers	Systemic
Short term Dermal	8 mg/cm <sup>2</sup>	Workers	Local
Long term Inhalation	0.68 mg/m <sup>3</sup>	Consumers	Systemic
Long term Oral	0.2 mg/kg bw/day	Consumers	Systemic
Long term Dermal	1.25 mg/ kg bw/day	Consumers	Systemic
Short term Dermal	8 mg/m³	Consumers	Local
Long term Dermal	8 mg/cm <sup>2</sup>	Workers	Local
Long term Dermal	8 mg/cm <sup>2</sup>	Consumers	Local
Long term Inhalation	0.44 mg/m³	Workers	Systemic
Short term Dermal	0.41 mg/ cm <sup>2</sup>	Workers	Local
Long term Dermal	2.075 mg/ kg	Workers	Systemic
Long term Inhalation	0.11 mg/m³	Consumers	Systemic
Long term Oral	0.0625 mg/ kg	Consumers	Systemic
Long term Dermal	1.0375 mg/ kg	Consumers	Systemic
Short term Dermal	0.41 mg/ cm <sup>2</sup>	Consumers	Local
Long term Inhalation	73.5 mg/m³	Workers	Systemic
Long term Dermal	20.8 mg/ kg bw/day	Workers	Systemic
Long term Inhalation	21.7 mg/m³	Consumers	Systemic
Long term Dermal	12.5 mg/ kg bw/day	Consumers	Systemic
Long term Oral	12.5 mg/ kg bw/day	Consumers	Systemic
Long term Inhalation	161.6 mg/ m³	Workers	Systemic
Long term Dermal	12.5 mg/kg	Workers	Systemic
Long term Dermal	11.8 mg/ cm²	Workers	Local
	Inhalation Long term Dermal Long term Inhalation Long term Oral Long term Dermal	Inhalation Long term Dermal Short term Dermal Long term Oral Long term Oral Cong term Oral Cong term Oral Cong term Dermal Cong term Oral Cong term Dermal Cong term Oral Con	Inhalation Long term Dermal Long term Dermal Long term Dermal Short term Dermal Long term Oral Long term Oral Long term Dermal Long term Oral Long term Dermal



## **SECTION 8: Exposure controls/personal protection**

	DNEL	Long term Oral	13.75 mg/ kg	Consumers	Systemic
	DNEL	Long term Inhalation	47.8 mg/m³	Consumers	Systemic
	DNEL	Long term Dermal	7.5 mg/kg	Consumers	Systemic
	DNEL	Long term Dermal	11.8 mg/ cm²	Consumers	Local
2,6-di-tert-butyl-p-cresol	DNEL	Long term Inhalation	58 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	1.74 mg/m³	Consumers	Systemic
	DNEL	Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	Consumers	Systemic

### **PNECs**

Product/ingredient name	<b>Compartment Detail</b>	Value	Method Detail
citral	Fresh water	0.00678 mg/l	-
	Marine water	0.000678 mg/l	-
	Fresh water sediment	0.125 mg/kg	-
	Marine water sediment	0.0125 mg/kg	-
	Soil	0.0209 mg/kg	-
	Sewage Treatment Plant	1.6 mg/l	-
	Intermittent release	0.0678 mg/l	-
1-(1,2,3,4,5,6,7,8-octahydro-2,3,8, 3-tetramethyl-2-naphthyl)ethan-1-one	Fresh water	0.0028 mg/l	-
	Marine water	0.00028 mg/l	-
	Fresh water sediment	3.73 mg/kg	-
	Marine water sediment	0.75 mg/kg	-
	Soil	0.705 mg/kg	-
inalool	Fresh water	0.2 mg/l	-
	Marine water	0.02 mg/l	-
	Intermittent release	2 mg/l	-
	Fresh water sediment	2.22 mg/kg dwt	-
	Marine water sediment	0.222 mg/kg dwt	-
	Soil	0.327 mg/kg dwt	-
	Sewage Treatment Plant	>10 mg/l	-
e of issue/Date of revision : 2015-06-0	3. Date of printing	: 2015-06-03	Version : 1.01

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 9/23



### **SECTION 8: Exposure controls/personal protection**

SECTION 6. Exposure controls/p	orsonal protection	'11	
linalyl acetate	Fresh water	0.011 mg/l	-
	Marine water	0.0011 mg/l	-
	Marine water sediment	0.0609 mg/kg	-
	Soil	0.115 mg/kg	-
	Sewage Treatment Plant	10 mg/l	-
	Intermittent release	0.11 mg/l	-
	Fresh water sediment	0.609 mg/kg	-
2-(4-tert-butylbenzyl)propionaldehyde	Fresh water	0.00204 mg/l	-
	Marine water	0.0002 mg/l	-
	Fresh water sediment	0.269 mg/kg	-
	Marine water sediment	0.0269 mg/kg	-
	Soil	0.0525 mg/kg	-
	Sewage Treatment Plant	10 mg/l	-
2,6-dimethyloct-7-en-2-ol	Fresh water	0.278 mg/l	-
	Marine water	0.278 mg/l	-
	Soil	0.103 mg/kg	-
	Fresh water sediment	0.594 mg/kg	-
	Marine water sediment	0.0594 mg/kg	-
2,6-di-tert-butyl-p-cresol	Soil	1.04 mg/kg wwt	Equilibrium Partitioning
	Sewage Treatment Plant	100 mg/l	Assessment Factors
	Sediment	1.29 mg/kg wwt	Equilibrium Partitioning
	Secondary Poisoning	16.7 mg/kg	Assessment Factors
	Marine water	0.4 μg/l	Assessment Factors
	Fresh water	4 μg/l	Assessment Factors

#### 8.2 Exposure controls

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### **Individual protection measures**

**Hygiene measures** 

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 10/23

### SECTION 8: Exposure controls/personal protection

**Eye/face protection** 

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### **Skin protection**

**Hand protection** 

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** 

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** 

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure** controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

#### **Appearance**

**Physical state** : Liquid.

Color Characteristic. Odor Characteristic. Not available. **Odor threshold** : Not available. pН Melting point/freezing point Not available. : Not available. Initial boiling point and boiling range

Closed cup: 79°C Flash point **Evaporation rate** : Not available. Upper/lower flammability or : Not available.

explosive limits

Vapor pressure : 0.18 hPa Vapor density Not available.

0.948 to 0.958 g/cm3 [20°C] **Density** Solubility in water : Non water-soluble liquid

Partition coefficient: n-octanol/ : Not available.

water

**Auto-ignition temperature** Not available. **Decomposition temperature** Not available.

**Viscosity** Kinematic ( $40^{\circ}$ C): <0.07 cm<sup>2</sup>/s (Estimated.)

**Explosive properties** Not available.

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01





### **SECTION 9: Physical and chemical properties**

Oxidizing properties : Not available.

#### 9.2 Other information

No additional information.

### SECTION 10: Stability and reactivity

10.1 Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

: The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

: No specific data.

10.5 Incompatible materials

: No specific data.

10.6 Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
citral	LD50 Dermal	Rabbit	2250 mg/kg	-
	LD50 Oral	Rat	3.45 g/kg	-
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
linalool	LD50 Dermal	Rabbit	5610 mg/kg	-
	LD50 Dermal	Rat	5610 mg/kg	-
	LD50 Oral	Rat	2790 mg/kg	-
dipentene	LD50 Oral	Rat	5300 mg/kg	-
linalyl acetate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	13934 mg/kg	-
2-(4-tert-butylbenzyl) propionaldehyde	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	1390 mg/kg	-
nerol	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	_
2,6-dimethyloct-7-en-2-ol	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	3600 mg/kg	-

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 12/23



## **SECTION 11: Toxicological information**

geraniol	LD50 Dermal	Rabbit	>5000 mg/kg	-	
	LD50 Oral	Rat	2.1 g/kg	-	
α-methyl-1,3-benzodioxole-5 -propionaldehyde	LD50 Dermal	Rabbit	>2000 mg/kg	-	
	LD50 Oral	Rat	3600 mg/kg	-	
2,6-di-tert-butyl-p-cresol	LD50 Dermal	Rat	>5000 mg/kg	-	
	LD50 Oral	Rat	>5000 mg/kg	-	

### **Acute toxicity estimates**

Route	ATE value
Oral	46333.3 mg/kg

### **Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
citral	Skin - Moderate irritant	Guinea pig	-	48 hours 1 Percent	-
	Skin - Severe irritant	Guinea pig	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 40 milligrams	-
	Skin - Severe irritant	Man	-	48 hours 16 milligrams	-
	Skin - Severe irritant	Pig	-	48 hours 50 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 100 milligrams	-
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	Skin - Irritant	Human	-	-	-
linalool	Eyes - Moderate irritant	Rabbit	-	1 hours 0.1 Mililiters	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Moderate irritant	Guinea pig	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Human	-	72 hours 32 Percent	-
	Skin - Mild irritant	Man	-	48 hours 16 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 100 milligrams	-
nte of issue/Date of revision	: 2015-06-03	· 20	1 115_06_03	Ners	ion :1 01 13/23

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 13/23



## SECTION 11: Toxicological information

linalyl acetate    Skin - Moderate irritant   Guinea pig   -   24 hours 100 milligrams   -   24 hours 500 milligrams   -   24 hours 500 milligrams   -   -   24 hours 500 milligrams   -   -   -   -   -   -   -   -   -	OLOTION III. TOXICO					
2-(4-tert-butylbenzyl) propionaldehyde  nerol Eyes - Moderate irritant Rabbit - 0.1 Millilters - 0.5 Millilters - 24 hours 500 milligrams  2-(4-tert-butylbenzyl) propionaldehyde  nerol Eyes - Moderate irritant Rabbit - 0.1 Millilters - 24 hours 500 milligrams  2,6-dimethyloct-7-en-2-ol Eyes - Mild irritant Rabbit - 7.5 Percent - 3.6 Millilters  Skin - Mild irritant Rabbit - 4 hours 0.5 Millilters  Skin - Mild irritant Rabbit - 24 hours 500 milligrams  Guinea pig - 30 Percent - 30 P	linalyl acetate	Skin - Moderate irritant	Guinea pig	1		-
propionaldenyde nerol Eyes - Moderate irritant Rabbit - 0.1 Milliters - Skin - Moderate irritant Rabbit - 24 hours 500 - milligrams  2,6-dimethyloct-7-en-2-ol Eyes - Mild irritant Rabbit - 7.5 Percent - Skin - Mild irritant Rabbit - 4 hours 0.5 - Milliters Skin - Mild irritant Rabbit - 24 hours 500 - milligrams  geraniol Skin - Mild irritant Guinea pig - 30 Percent - Skin - Severe irritant Guinea pig - 24 hours 100 - milligrams  Skin - Severe irritant Human - 48 hours 32 - Percent Skin - Severe irritant Man - 24 hours 16 - milligrams  Skin - Moderate irritant Rabbit - 4 hours 0.5 - Milliters  Skin - Severe irritant Rabbit - 24 hours 10 - milligrams  Skin - Severe irritant Rabbit - 24 hours 10 - milligrams  Skin - Severe irritant Rabbit - 24 hours 10 - milligrams		Skin - Severe irritant	Rabbit	-		-
Skin - Moderate irritant  Rabbit  - 24 hours 500 milligrams  - 7.5 Percent  Skin - Mild irritant  Rabbit  - 7.5 Percent  - 4 hours 0.5 Milliliters  Skin - Mild irritant  Rabbit  - 24 hours 500 milligrams  - 30 Percent  Skin - Mild irritant  Guinea pig  - 30 Percent  Skin - Severe irritant  Guinea pig  - 48 hours 32 Percent  Skin - Severe irritant  Man  - 48 hours 32 Percent  Skin - Severe irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams  Skin - Severe irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams		Skin - Moderate irritant	Rabbit	-		-
2,6-dimethyloct-7-en-2-ol Eyes - Mild irritant Rabbit - 7.5 Percent - Skin - Mild irritant Rabbit - 4 hours 0.5 Millilters - Skin - Mild irritant Rabbit - 24 hours 500 milligrams - Skin - Mild irritant Guinea pig - 30 Percent - Skin - Severe irritant Guinea pig - 24 hours 100 milligrams - Skin - Severe irritant Human - 48 hours 32 - Percent Skin - Severe irritant Man - 24 hours 16 milligrams - Skin - Moderate irritant Rabbit - 4 hours 0.5 Millilters Skin - Severe irritant Rabbit - 24 hours 100 milligrams - Skin - Severe irritant Rabbit - 24 hours 100 milligrams - Skin - Severe irritant Rabbit - 24 hours 100 milligrams - Skin - Severe irritant Rabbit - 24 hours 100 milligrams - Skin - Severe irritant Rabbit - 24 hours 100 milligrams - Skin - Severe irritant Rabbit - 24 hours 100 milligrams - Skin - Severe irritant Rabbit - 24 hours 100 milligrams	nerol	Eyes - Moderate irritant	Rabbit	-	0.1 Mililiters	-
Skin - Mild irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Mild irritant  Rabbit  - 24 hours 500 milligrams  Skin - Mild irritant  Guinea pig  - 30 Percent  Skin - Severe irritant  Guinea pig  - 24 hours 100 milligrams  Skin - Severe irritant  Human  - 48 hours 32 Percent  Skin - Severe irritant  Man  - 24 hours 16 milligrams  Skin - Moderate irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams		Skin - Moderate irritant	Rabbit	-		-
Skin - Mild irritant  Rabbit  Guinea pig  Guinea pig  Skin - Severe irritant  Guinea pig  Milliliters  24 hours 500 - milligrams  30 Percent  Guinea pig  Human  Human  Human  Man  Skin - Severe irritant  Man  Skin - Severe irritant  Rabbit  Rabbit  A hours 32 - Percent  Skin - Severe irritant  Rabbit  A hours 16 - milligrams  Skin - Moderate irritant  Rabbit  Rabbit  A hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  Rabbit  A hours 100 - milligrams	2,6-dimethyloct-7-en-2-ol	Eyes - Mild irritant	Rabbit	-	7.5 Percent	-
geraniol Skin - Mild irritant Guinea pig - 30 Percent - Skin - Severe irritant Guinea pig - 24 hours 100 - milligrams  Skin - Severe irritant Human - 48 hours 32 - Percent Skin - Severe irritant Man - 24 hours 16 - milligrams  Skin - Moderate irritant Rabbit - 4 hours 0.5 - Milliliters  Skin - Severe irritant Rabbit - 24 hours 100 - milligrams		Skin - Mild irritant	Rabbit	-		-
Skin - Severe irritant  Guinea pig  - 24 hours 100 milligrams  Skin - Severe irritant  Human  - 48 hours 32 - Percent  Skin - Severe irritant  Man  - 24 hours 16 milligrams  Skin - Moderate irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 10 milligrams		Skin - Mild irritant	Rabbit	-		-
Skin - Severe irritant  Human  - 48 hours 32 - Percent  Skin - Severe irritant  Man  - 24 hours 16 milligrams  Skin - Moderate irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams	geraniol	Skin - Mild irritant	Guinea pig	-	30 Percent	-
Skin - Severe irritant  Man  - 24 hours 16 milligrams  Skin - Moderate irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams		Skin - Severe irritant	Guinea pig	-		-
Skin - Moderate irritant  Rabbit  - 4 hours 0.5 Milliliters  Skin - Severe irritant  Rabbit  - 24 hours 100 milligrams		Skin - Severe irritant	Human	-		-
Skin - Severe irritant Rabbit - 24 hours 100 - milligrams		Skin - Severe irritant	Man	-		-
milligrams		Skin - Moderate irritant	Rabbit	-		-
Eyes - Severe irritant Rabbit		Skin - Severe irritant	Rabbit	-		-
Consideration		Eyes - Severe irritant	Rabbit	-	-	-

### **Sensitization**

Product/ingredient name	Route of exposure	Species	Result
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	skin	Mouse	Sensitizing
2-(4-tert-butylbenzyl) propionaldehyde	skin	Mouse	Sensitizing
	skin	Human	Sensitizing
geraniol	skin	Mouse	Sensitizing

### **Mutagenicity**



### **SECTION 11: Toxicological information**

Product/ingredient name	Test	Experiment	Result
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	-	Experiment: In vitro Subject: Mammalian-Human	Negative
	-	Experiment: In vivo Subject: Mammalian-Animal	Negative
2,6-di-tert-butyl-p-cresol	-	Experiment: In vitro Subject: Bacteria	Negative
	-	Experiment: In vitro Subject: Mammalian-Animal	Negative
	-	Experiment: In vivo Subject: Mammalian-Animal	Negative

#### **Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
2-(4-tert-butylbenzyl) propionaldehyde	-	Positive	-	Dog - Male	Oral	-
2,6-di-tert-butyl-p-cresol	Negative	-	-	Rat - Male, Female	Oral: 100 mg/kg	-

#### **Aspiration hazard**

Product/ingredient name	Result
dipentene	ASPIRATION HAZARD - Category 1

#### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

**Skin contact**: Causes skin irritation. May cause an allergic skin reaction.

**Ingestion**: Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:

pain or irritation watering

redness

Inhalation : Adverse

: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

**Skin contact**: Adverse symptoms may include the following:

irritation redness

reduced fetal weight increase in fetal deaths skeletal malformations

**Ingestion** : Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

**Short term exposure** 

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 15/23





### **SECTION 11: Toxicological information**

**Potential immediate** 

effects

: Not available.

Potential delayed effects

: Not available.

**Long term exposure** 

**Potential immediate** 

)

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
2,6-di-tert-butyl-p-cresol	Chronic NOAEL Oral	Rat	25 mg/kg	28 days; 7 days per week

**General** 

: Once sensitized, a severe allergic reaction may occur when subsequently exposed

to very low levels.

Carcinogenicity: No known significant effects or critical hazards.Mutagenicity: No known significant effects or critical hazards.Teratogenicity: No known significant effects or critical hazards.Developmental effects: No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Interactive effects : Not available.

**Toxicokinetics** 

Absorption: Not available.Distribution: Not available.Metabolism: Not available.Elimination: Not available.Other information: Not available.

### **SECTION 12: Ecological information**

#### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
citral	Acute EC50 103.8 mg/l	Aquatic plants	72 hours
	Acute EC50 7 mg/l	Daphnia	48 hours
	Acute LC50 6.8 mg/l	Fish	96 hours
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	Acute EC50 2.6 mg/l	Algae	72 hours
	Acute EC50 1.38 mg/l	Daphnia	48 hours
	Acute LC50 1.3 mg/l	Fish	96 hours
	Chronic NOEC 0.028 mg/l	Daphnia	21 days
	Chronic NOEC 0.16 mg/l	Fish	30 days
linalool	Acute EC50 141.4 mg/l	Aquatic plants	96 hours
	Acute EC50 59 mg/l	Daphnia	48 hours
	Acute EC50 >100 mg/l	Micro-organism	3 hours
	Acute LC50 27.8 mg/l	Fish	96 hours
dipentene	Acute EC50 28.2 mg/l Fresh water	Daphnia - Daphnia magna	48 hours

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 16/23



## **SECTION 12: Ecological information**

ECTION 12: Ecologi	cai information		
	Acute EC50 20.2 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute IC50 13.798 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 31 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 38.5 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
linalyl acetate	Acute EC50 15 mg/l	Daphnia	48 hours
	Acute LC50 11 mg/l	Fish	96 hours
	Chronic NOEC 9.6 mg/l	Algae	72 hours
2-(4-tert-butylbenzyl) propionaldehyde	Acute EC50 29.16 mg/l	Algae - Scenedesmus subspicatus	72 hours
	Acute EC50 10.7 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 2.04 mg/l	Fish - Brachydanio rerio	96 hours
nerol	Acute EC50 34.7 mg/l	Daphnia	48 hours
2,6-dimethyloct-7-en-2-ol	Acute EC50 3.88 mg/l	Algae	96 hours
	Acute LC50 5.7 mg/l	Daphnia	48 hours
	Acute LC50 4.81 mg/l	Fish	96 hours
geraniol	Acute EC50 13.1 mg/l	Algae	72 hours
	Acute EC50 7.75 mg/l	Daphnia	48 hours
	Acute LC50 22 mg/l	Fish	96 hours
α-methyl-1,3-benzodioxole-5 -propionaldehyde	Acute EC50 8.3 mg/l	Daphnia	48 hours
2,6-di-tert-butyl-p-cresol	Acute EC50 0.61 mg/l	Daphnia	48 hours
	Acute EC50 >10000 mg/l	Micro-organism	3 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
citral	OECD 301C Ready Biodegradability - Modified MITI Test (I)	92 % - Readily - 28 days	-	-
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	OECD 301C Ready Biodegradability - Modified MITI Test (I)	11 % - Not readily - 28 days	-	-
linalool	OECD 301C Ready Biodegradability -	64.2 % - Readily - 28 days	-	-

Date of issue/Date of revision: 2015-06-03.Date of printing: 2015-06-03.Version: 1.0117/23



## SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis		Biodegradability
α-methyl-1,3-benzodioxole-5 -propionaldehyde	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	29 % - Not readily - 28 days	-	-
geraniol	OECD 301A Ready Biodegradability - DOC Die-Away Test	100 % - Readily - 28 days	-	-
2,6-dimethyloct-7-en-2-ol	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	72 % - Readily - 28 days	-	-
nerol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	86 % - Readily - 28 days	-	-
2-(4-tert-butylbenzyl) propionaldehyde	OECD 301F Ready Biodegradability - Manometric Respirometry Test	84 % - Readily - 28 days	-	Activated sludge
linalyl acetate	Test (I) OECD 301F Ready Biodegradability - Manometric Respirometry Test	75 % - Readily - 28 days	-	-
	Modified MITI			

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
citral	-	-	Readily
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	-	-	Not readily
linalool	-	-	Readily
linalyl acetate	-	-	Readily
2-(4-tert-butylbenzyl) propionaldehyde	-	-	Readily
nerol	-	-	Readily
2,6-dimethyloct-7-en-2-ol	-	-	Readily
geraniol	-	-	Readily
α-methyl-1,3-benzodioxole-5 -propionaldehyde	_	-	Not readily

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 18/23



### **SECTION 12: Ecological information**

0.0 11 / 1 / 1			
2,6-di-tert-butyl-p-cresol	-	-	Not readily

#### 12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
citral	2.76	89.72	low
1-(1,2,3,4,5,6,7,8-octahydro- 2,3,8,8-tetramethyl- 2-naphthyl)ethan-1-one	5.65	-	high
linalool	2.84	-	low
dipentene	4.57	-	high
linalyl acetate	3.9	173.9	low
2-(4-tert-butylbenzyl) propionaldehyde	4.2	349.8	low
nerol	3.47	-	low
2,6-dimethyloct-7-en-2-ol	3.25	64.8	low
geraniol	2.6	-	low
α-methyl-1,3-benzodioxole-5 -propionaldehyde	1.368	-	low
2,6-di-tert-butyl-p-cresol	4.17	330 to 1800	high

#### 12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Mobility : Not available.

#### 12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

**12.6 Other adverse effects**: No known significant effects or critical hazards.

### **SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

#### 13.1 Waste treatment methods

#### **Product**

**Methods of disposal** 

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC)

 Date of issue/Date of revision
 : 2015-06-03.
 Date of printing
 : 2015-06-03.
 Version
 : 1.01
 19/23



### **SECTION 13: Disposal considerations**

Waste code	Waste designation
16 03 05* organic wastes containing dangerous substances	

#### **Packaging**

**Methods of disposal** 

- : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- **Special precautions**
- : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

### **SECTION 14: Transport information**

	ADR/RID	IMDG	IATA
14.1 UN number	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6, 7,8-octahydro-2,3,8, 8-tetramethyl-2-naphthyl)ethan- 1-one, dipentene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6, 7,8-octahydro-2,3,8, 8-tetramethyl-2-naphthyl)ethan- 1-one, dipentene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one, dipentene)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Yes.	Marine pollutant	Yes.
Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  Tunnel code (E)	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

user

14.6 Special precautions for : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

Version : 1.01 Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. 20/23





### **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

**Annex XIV** 

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
2-(4-tert-butylbenzyl) propionaldehyde	-	-	-	Repr. 2, H361f (Fertility)

#### **Registration status**

All components are listed : Australia inventory (AICS)

China inventory (IECSC)

Japan inventory

Korea inventory

Philippines inventory (PICCS)

United States inventory (TSCA 8b)

Europe inventory (EINECS/ELINCS/

NLP)

Canada inventory (DSL)

### 15.2 Chemical Safety

**Assessment** 

: This product contains substances for which Chemical Safety Assessments are still required.

### **SECTION 16: Other information**

Indicates information that has changed from previously issued version.

**Abbreviations and** acronyms

: ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

1272/2008]

DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 21/23



### **SECTION 16: Other information**

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 2, H361f (Fertility)	Calculation method
Aquatic Chronic 2, H411	Calculation method
Full tout of abbraviated U. J. 1926 Flammable liquid and years	

Full text of abbreviated H statements

Flammable liquid and vapor. : H226

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation.

Suspected of damaging fertility.

H361f (Fertility)

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.

**Full text of classifications** [CLP/GHS]

Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4 Aquatic Acute 1, H400 AQUATIC HAZARD (ACUTE) - Category 1 Aquatic Chronic 1, H410 AQUATIC HAZARD (LONG-TERM) - Category 1 Aquatic Chronic 2, H411 AQUATIC HAZARD (LONG-TERM) - Category 2

ASPIRATION HAZARD - Category 1 Asp. Tox. 1, H304

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 Eye Dam. 1, H318 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

FLAMMABLE LIQUIDS - Category 3 Flam. Liq. 3, H226

Repr. 2, H361f (Fertility) TOXIC TO REPRODUCTION (Fertility) - Category 2 SKIN CORROSION/IRRITATION - Category 2

Skin Irrit. 2, H315 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1 Skin Sens. 1B, H317 SKIN SENSITIZATION - Category 1B

Full text of abbreviated R phrases

R10- Flammable.

R62- Possible risk of impaired fertility.

R22- Harmful if swallowed.

R65- Harmful: may cause lung damage if swallowed.

R41- Risk of serious damage to eyes.

R38- Irritating to skin.

R43- May cause sensitization by skin contact.

R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in

the aquatic environment.

R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

**Full text of classifications** [DSD/DPD]

: Repr. Cat. 3 - Toxic to reproduction category 3

Xn - Harmful Xi - Irritant

N - Dangerous for the environment

Date of printing : 2015-06-03. Date of issue/ Date of

revision

2015-06-03.

: 2015-04-22. Date of previous issue

**Version** 1.01

#### **Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Date of issue/Date of revision : 2015-06-03. Date of printing Version : 1.01 22/23 *2*015-06-03.



Date of issue/Date of revision : 2015-06-03. Date of printing : 2015-06-03. Version : 1.01 23/23