

SAFETY DATA SHEET

Fragrance 49383914

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

1.1 Product identifier

Product code : Fragrance 49383914**Product name** : CASSIS FIG 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 Sens. 1, H317

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 : R43
N; R51/53**Human health hazards** : 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

Hazard pictograms :**Signal word** : Warning

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SECTION 2: Hazards identification

Hazard statements	: H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects.
<u>Precautionary statements</u>	
Prevention	: P280 - Wear protective gloves. P273 - Avoid release to the environment. P261 - Avoid breathing vapor.
Response	: P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P333 + P313 - If skin irritation or rash occurs: Get medical attention.
Storage	: Not applicable.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: 4-tert-butylcyclohexyl acetate citronellol pin-2(10)-ene coumarin (E)-1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-2-buten-1-one 2,4-dimethylcyclohex-3-ene-1-carbaldehyde hexyl salicylate
Supplemental label elements	: Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: None known.
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SECTION 3: Composition/information on ingredients

3.1 Substances	: Not applicable.
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3.2 Mixtures	: Mixture
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Product/ingredient name	Identifiers	%	<u>Classification</u>		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
4-tert-butylcyclohexyl acetate	REACH #: 01-2119976286-24 EC: 250-954-9 CAS: 32210-23-4	8.00	R43 N; R51/53	Skin Sens. 1B, H317	[1]
2-tert-butylcyclohexyl acetate	REACH #: 01-2119970713-33 EC: 201-828-7 EC: 243-718-1 CAS: 88-41-5 CAS: 20298-69	6.50	N; R51/53	Aquatic Chronic 2, H411	[1]
citronellol	REACH #: 01-2119453995-23 EC: 203-375-0 CAS: 106-22-9	6.21	Xi; R38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317	[1]
3,7-dimethyloctan-3-ol	REACH #: 01-2119454788-21 EC: 201-133-9 CAS: 78-69-3	3.50	Xi; R38 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
Oxacyclohexadecen-2-one	REACH #: 01-0000016883-62 EC: 422-320-3 CAS: 34902-57-3 CAS: 111879-80-2	2.50	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]

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SECTION 3: Composition/information on ingredients

	Index: 606-092-00-4				
α,α -dimethylphenethyl acetate	EC: 205-781-3 CAS: 151-05-3	1.20	R52/53	Aquatic Chronic 3, H412	[1]
α,α -dimethylphenethyl butyrate	EC: 233-221-8 CAS: 10094-34-5	1.20	N; R51/53	Aquatic Chronic 2, H411	[1]
allyl heptanoate	REACH #: 01-2119488961-23 EC: 205-527-1 CAS: 142-19-8	0.10	T; R23 Xn; R21/22 N; R50/53	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412	[1]
hexyl salicylate	REACH #: 01-2119638275-36 EC: 228-408-6 CAS: 6259-76-3	0.10	Xi; R38 R43 N; R50/53 See Section 16 for the full text of the R-phrases declared above.	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	[1]

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) : 0.9%

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 if irritation occurs.
- 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 adverse health effects persist or are severe. 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.

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SECTION 4: First aid measures

- 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 if adverse health effects persist or are severe. 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** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.
- 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

- 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.

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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.

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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. 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. 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

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SECTION 7: Handling and storage

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

No exposure limit value known.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
citronellol	DNEL	Long term Inhalation	161.6 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	327.4 mg/kg	Workers	Systemic
	DNEL	Short term Dermal	2.95 mg/cm ²	Workers	Local
	DNEL	Long term Inhalation	47.8 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	196.4 mg/kg	Consumers	Systemic
	DNEL	Long term Oral	13.8 mg/kg	Consumers	Systemic
	DNEL	Short term Dermal	2.95 mg/cm ²	Consumers	Local
	DNEL	Long term Inhalation	10 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	10 mg/m ³	Consumers	Local
	DNEL	Long term Inhalation	2.75 mg/m ³	Workers	Systemic
3,7-dimethyloctan-3-ol	DNEL	Long term Dermal	2.5 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	2.76 mg/cm ²	Workers	Local
	DNEL	Long term Inhalation	0.68 mg/cm ²	Consumers	Systemic
	DNEL	Long term Oral	0.2 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	1.25 mg/kg bw/day	Consumers	Systemic

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SECTION 8: Exposure controls/personal protection

allyl heptanoate	DNEL	Short term Dermal	2.76 mg/cm ²	Consumers	Local
	DNEL	Long term Inhalation	16 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	4.7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	4.1 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	2.3 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	2.3 mg/kg bw/day	Consumers	Systemic
hexyl salicylate	DNEL	Long term Inhalation	0.729 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	2083 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.219 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	1250 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
4-tert-butylcyclohexyl acetate	Fresh water	0.0053 mg/l	-
	Marine water	0.00053 mg/l	-
	Intermittent release	0.053 mg/l	-
	Fresh water sediment	2.01 mg/kg	-
	Marine water sediment	0.21 mg/kg	-
	Soil	0.42 mg/kg	-
citronellol	Fresh water	0.0024 mg/l	-
	Marine water	0.00024 mg/l	-
	Sewage Treatment Plant	580 mg/l	-
	Fresh water sediment	0.0256 mg/kg	-
	Marine water sediment	0.00256 mg/l	-
	Soil	0.00371 mg/kg	-
3,7-dimethyloctan-3-ol	Intermittent release	0.024 mg/l	-
	Fresh water	0.0089 mg/l	-
	Marine water	0.00089 mg/l	-
	Sewage Treatment Plant	450 mg/l	-

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SECTION 8: Exposure controls/personal protection

allyl heptanoate	Fresh water sediment	0.0821 mg/kg	-
	Marine water sediment	0.00821 mg/kg	-
	Soil	0.0023 mg/kg	-
	Fresh water	0.00012 mg/l	-
	Fresh water sediment	0.012 mg/kg dwt	-
	Marine water	0.000012 mg/l	-
	Marine water sediment	0.001 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-
hexyl salicylate	Soil	0.002 mg/kg dwt	-
	Fresh water	0.000357 mg/l	-
	Marine water	0.0000357 mg/l	-
	Fresh water sediment	0.059 mg/kg	-
	Marine water sediment	0.0059 mg/kg	-
	Soil	0.0542 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

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: safety glasses with side-shields.

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.

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SECTION 8: Exposure controls/personal protection

- 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.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 93°C
- Evaporation rate** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** : 0.07 hPa
- Vapor density** : Not available.
- Density** : 0.976 to 0.986 g/cm³ [20°C]
- Solubility in water** : Non water-soluble liquid
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C): <0.07 cm²/s (Estimated.)
- Explosive properties** : Not available.
- 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.

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SECTION 10: Stability and reactivity

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
4-tert-butylcyclohexyl acetate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3550 mg/kg	-
2-tert-butylcyclohexyl acetate	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	4600 mg/kg	-
citronellol	LD50 Dermal	Rabbit	2650 mg/kg	-
	LD50 Oral	Rat	3450 mg/kg	-
3,7-dimethyloctan-3-ol	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Oxacyclohexadecen-2-one	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
α,α -dimethylphenethyl acetate	LD50 Oral	Rat	3300 mg/kg	-
α,α -dimethylphenethyl butyrate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
allyl heptanoate	LD50 Dermal	Rabbit	810 mg/kg	-
hexyl salicylate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-

Acute toxicity estimates

Route	ATE value
Oral	100000 mg/kg
Dermal	810000 mg/kg
Inhalation (vapors)	3000 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
citronellol	Eyes - Moderate irritant	Rabbit	-	0.42 Percent	-
	Skin - Severe irritant	Guinea pig	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Man	-	48 hours 16 milligrams	-
	Skin - Moderate irritant	Rabbit	-	4 hours 0.42 Percent	-

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SECTION 11: Toxicological information

3,7-dimethyloctan-3-ol	Skin - Severe irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Severe irritant	Rabbit	-	4 hours 0.5 Milliliters	-
	Eyes - Moderate irritant	Rabbit	-	0.1 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
allyl heptanoate	Eyes - Mild irritant	Rabbit	-	-	-

Sensitization

Product/ingredient name	Route of exposure	Species	Result
citronellol	skin	Mouse	Sensitizing
allyl heptanoate	skin	Rabbit	Not sensitizing

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
irritation
redness
Ingestion : No specific data.

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

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Long term exposure

- Potential immediate effects** : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

- 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 : No known significant effects or critical hazards.
Interactive effects : Not available.

Toxicokinetics

- Absorption** : Not available.
Distribution : Not available.

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SECTION 11: Toxicological information

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

SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
4-tert-butylcyclohexyl acetate	Acute EC50 5.3 mg/l	Daphnia	48 hours
	Acute LC50 8.6 mg/l	Fish	96 hours
2-tert-butylcyclohexyl acetate	Acute EC50 17 mg/l	Aquatic plants	72 hours
	Acute EC50 17 mg/l	Daphnia	48 hours
	Acute LC50 1.7 mg/l	Fish	96 hours
citronellol	Acute EC10 580 mg/l	Micro-organism	30 minutes
	Acute EC50 2.4 mg/l	Aquatic plants	72 hours
	Acute EC50 17.48 mg/l	Daphnia	48 hours
	Acute LC50 14.66 mg/l	Fish	96 hours
3,7-dimethyloctan-3-ol	Acute EC50 14.2 mg/l	Daphnia	48 hours
	Acute LC50 8.9 mg/l	Fish	96 hours
Oxacyclohexadecen-2-one	Acute EC50 >0.96 mg/l	Daphnia	48 hours
	Acute LC50 >0.8 mg/l	Fish	96 hours
α,α -dimethylphenethyl acetate	Acute EC50 21.3 mg/l	Daphnia	24 hours
α,α -dimethylphenethyl butyrate	Acute EC50 2 mg/l	Daphnia	48 hours
allyl heptanoate	Acute EC50 3.27 mg/l	Algae	72 hours
	Acute EC50 0.89 mg/l	Daphnia	48 hours
	Acute LC50 0.12 mg/l	Fish	96 hours
	Acute NOEC 0.278 mg/l	Algae	72 hours
hexyl salicylate	Acute EC50 0.357 mg/l	Daphnia	48 hours
	Acute LC50 0.61 mg/l	Algae	72 hours
	Acute LC50 1.34 mg/l	Fish	96 hours

12.2 Persistence and degradability

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SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
4-tert-butylcyclohexyl acetate	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	75 % - Readily - 28 days	-	-
2-tert-butylcyclohexyl acetate	OECD 301F Ready Biodegradability - Manometric Respirometry Test	43 % - Not readily - 28 days	-	-
citronellol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	90 % - Readily - 28 days	-	-
3,7-dimethyloctan-3-ol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	64 % - Readily - 28 days	-	-
Oxacyclohexadecen-2-one	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97 % - Readily - 28 days	-	-
α,α -dimethylphenethyl acetate	OECD 301D Ready Biodegradability - Closed Bottle Test	13 % - Not readily - 28 days	-	-
α,α -dimethylphenethyl butyrate	OECD 301F Ready Biodegradability - Manometric Respirometry Test	82 % - Readily - 28 days	-	-
allyl heptanoate	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	83 % - Readily - 28 days	-	-
hexyl salicylate	OECD 301F Ready Biodegradability - Manometric Respirometry Test	82 % - Readily - 28 days	-	-

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SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
4-tert-butylcyclohexyl acetate	-	-	Readily
2-tert-butylcyclohexyl acetate	-	-	Not readily
citronellol	-	-	Readily
3,7-dimethyloctan-3-ol	-	-	Readily
Oxacyclohexadecen-2-one	-	-	Readily
α,α -dimethylphenethyl acetate	-	-	Not readily
α,α -dimethylphenethyl butyrate	-	-	Readily
allyl heptanoate	-	-	Readily
hexyl salicylate	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
4-tert-butylcyclohexyl acetate	4.8	334.6	low
citronellol	3.41	82.59	low
3,7-dimethyloctan-3-ol	3.3	99.87	low
Oxacyclohexadecen-2-one	5.45	-	high
allyl heptanoate	3.97	123.4	low
hexyl salicylate	5.5	8913	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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

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SECTION 13: Disposal considerations

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)




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. (2-tert-butylcyclohexyl acetate, Oxacyclohexadecen-2-one)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-tert-butylcyclohexyl acetate, Oxacyclohexadecen-2-one)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-tert-butylcyclohexyl acetate, Oxacyclohexadecen-2-one)
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.

14.6 Special precautions for user : **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.

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SECTION 14: Transport information

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable.

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 on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Registration status

All components are listed : United States inventory (TSCA 8b)

Europe inventory (EINECS/ELINCS/NLP)

Canada inventory (DSL/NDSL)

At least one component is not listed in DSL but all such components are listed in NDSL.

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]

Classification	Justification
Skin Sens. 1, H317 Aquatic Chronic 2, H411	Calculation method Calculation method

Full text of abbreviated H statements :

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

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SECTION 16: Other information

	H411	Toxic to aquatic life with long lasting effects.
	H412	Harmful to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS]	:	Acute Tox. 3, H301 ACUTE TOXICITY (oral) - Category 3
		Acute Tox. 3, H311 ACUTE TOXICITY (dermal) - Category 3
		Acute Tox. 3, H331 ACUTE TOXICITY (inhalation) - Category 3
		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
		Aquatic Chronic 3, H412 AQUATIC HAZARD (LONG-TERM) - Category 3
		Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
		Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2
		Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1
		Skin Sens. 1B, H317 SKIN SENSITIZATION - Category 1B
Full text of abbreviated R phrases	:	R23- Toxic by inhalation.
		R21/22- Harmful in contact with skin and if swallowed.
		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.
		R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD]	:	T - Toxic
		Xn - Harmful
		Xi - Irritant
		N - Dangerous for the environment
Date of printing	:	2015-06-03.
Date of issue/ Date of revision	:	2015-04-22.
Date of previous issue	:	No previous validation.
Version	:	1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named 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.