

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 1/14/2020 Revision date: 11/15/2023 Supersedes version of: 4/14/2023 Version: 2.0

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Freesia  
UFI : A5E1-62MJ-X00T-KW3D :  
Product code  
Type of product : Perfumes, fragrances  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use  
Industrial/Professional use spec : For professional use only  
Industrial  
Use of the substance/mixture : Perfumes, fragrances  
Function or use category : Odour agents

##### 1.2.2. Uses advised against

No additional information available

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

LK FAMILY KFT, HUNGARY, 9400, SOPRON,  
SELMECI U. 23  
info@candlemarket.eu

#### 1.4. Emergency telephone number

Emergency number : 1-800-255-3924; +01-813-248-0585; China: +400-120-0751; Mexico: +01-800-099-0731;  
Brazil: +0-800-591-6042; India: +000-800-100-4086

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin sensitisation, Category 1 H317  
Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411  
Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

Toxic to aquatic life with long lasting effects. May cause an allergic skin reaction.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

GHS09

Signal word (CLP) :

Warning

Contains

Melonal; Triplal (Vertocitral); Lemongrass oil ; Nerol; Hydroxy; Citral; Helional; Cyclamal;  
Hexyl salicylate; Linalool; Hexyl cinnamic aldehyde; Benzyl salicylate; Majantol

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P321 - Specific treatment (see supplemental first aid instruction on this label).

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexyl cinnamic aldehyde	CAS-No.: 101-86-0 EC-No.: 202-983-3 REACH-no: 01-2119533092-50	3.15 – 6.15	Skin Sens. 1, H317 Aquatic Chronic 2, H411
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	1.375 – 2.75	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Benzyl salicylate	CAS-No.: 118-58-1 EC-No.: 204-262-9 EC Index-No.: 607-754-00-5 REACH-no: 01-2119969442-31	1.3 – 2.6	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans)	CAS-No.: 63500-71-0 EC-No.: 405-040-6 EC Index-No.: 603-101-00-3 REACH-no: 01-000015458-64	0.625 – 2.5	Eye Irrit. 2, H319
3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol	CAS-No.: 103694-68-4 EC-No.: 403-140-4 EC Index-No.: 603-138-00-5	0.01225 – 2.45	Skin Sens. 1, H317 Aquatic Chronic 3, H412
Carbitol substance with national workplace exposure limit(s) (AT, DE, EE, SE, SI, CH)	CAS-No.: 111-90-0 EC-No.: 203-919-7 REACH-no: 01-2119475105-42	0.8860425 – 1.772085	Not classified
Hexyl salicylate	CAS-No.: 6259-76-3 EC-No.: 228-408-6	0.7125 – 1.65	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
citral substance with national workplace exposure limit(s) (BE, ES, IE, PL, PT)	CAS-No.: 5392-40-5 EC-No.: 226-394-6 EC Index-No.: 605-019-00-3 REACH-no: 01-2119462829-23	0.45 – 0.9	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Benzyl acetate substance with national workplace exposure limit(s) (BE, DK, ES, IE, LT, LV, PT, RO)	CAS-No.: 140-11-4 EC-No.: 205-399-7 REACH-no: 01-2119638272-42	0.4 – 0.8	Aquatic Chronic 3, H412
Cyclamal	CAS-No.: 103-95-7 EC-No.: 203-161-7 REACH-no: 01-2119970582-32	0.351225 – 0.7245	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Hydroxy	CAS-No.: 107-75-5 EC-No.: 203-518-7 REACH-no: 01-2119973482-31	0.344815 – 0.68963	Eye Irrit. 2, H319 Skin Sens. 1B, H317
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB)	CAS-No.: 1222-05-5 EC-No.: 214-946-9 EC Index-No.: 603-212-00-7 REACH-no: 01-2119488227-29	0.225 – 0.45	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nerol	CAS-No.: 106-25-2 EC-No.: 203-378-7	0.175 – 0.35	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
cis-3-Hexenyl salicylate	CAS-No.: 65405-77-8 EC-No.: 265-745-8	0.175 – 0.35	Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Helional	CAS-No.: 1205-17-0 EC-No.: 214-881-6 REACH-no: 01-2120740119-58	0.175 – 0.35	Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Chronic 2, H411
Melonal	CAS-No.: 106-72-9 EC-No.: 203-427-2	0.05 – 0.1	Skin Sens. 1B, H317
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0.05 – 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Lemongrass oil	CAS-No.: 8007-02-1 EC-No.: 616-903-3	0.05 – 0.1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### First-aid measures general

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

#### First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause an allergic skin reaction.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Sand. Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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

Fire hazard	: Flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
------------------	---

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
----------------------	--

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.  
Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.  
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.  
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed. Store in a well-ventilated place. Keep cool.  
Incompatible products : Strong bases. Strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.  
Storage temperature : 25 °C  
Storage area : Store in a well-ventilated place. Store away from heat.  
Special rules on packaging : Store in a closed container.  
Packaging materials : Do not store in corrodable metal.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

citral (5392-40-5)	
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	32 mg/m <sup>3</sup> (vapor and aerosol)
OEL TWA	5 ppm (vapor and aerosol)
OEL chemical category	Skin
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [2]	5 ppm
OEL STEL	15 ppm (calculated)
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	27 mg/m <sup>3</sup>
NDSch (OEL STEL)	54 mg/m <sup>3</sup>

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>citral (5392-40-5)</b>	
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	5 ppm (inhalable fraction; vapor)
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [2]	5 ppm (inhalable fraction and vapor)
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	5 ppm (inhalable fraction and vapor)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route, dermal sensitizer
<b>Benzyl acetate (140-11-4)</b>	
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	62 mg/m <sup>3</sup>
OEL TWA	10 ppm
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	61 mg/m <sup>3</sup>
OEL TWA [2]	10 ppm
OEL STEL	122 mg/m <sup>3</sup>
OEL STEL	20 ppm
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [2]	10 ppm
OEL STEL	30 ppm (calculated)
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	5 mg/m <sup>3</sup>
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	5 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	10 ppm
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	50 mg/m <sup>3</sup>
OEL TWA	8 ppm
OEL STEL	80 mg/m <sup>3</sup>
OEL STEL	13 ppm
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	62 mg/m <sup>3</sup>
VLA-ED (OEL TWA) [2]	10 ppm

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Benzyl acetate (140-11-4)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	10 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
<b>Carbitol (111-90-0)</b>	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	35 mg/m <sup>3</sup>
MAK (OEL TWA) [ppm]	6 ppm
MAK (OEL STEL)	140 mg/m <sup>3</sup>
MAK (OEL STEL) [ppm]	24 ppm
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	50.1 mg/m <sup>3</sup>
OEL TWA	10 ppm
OEL chemical category	Skin notation
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
AGW (OEL TWA) [1]	35 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	6 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA	35 mg/m <sup>3</sup>
OEL TWA	6 ppm
OEL STEL	70 mg/m <sup>3</sup>
OEL STEL	12 ppm
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	80 mg/m <sup>3</sup>
NGV (OEL TWA) [ppm]	15 ppm
KTV (OEL STEL)	170 mg/m <sup>3</sup>
KTV (OEL STEL) [ppm]	30 ppm
OEL chemical category	Skin notation
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	50 mg/m <sup>3</sup> (aerosol, inhalable dust, vapour)
KZGW (OEL STEL)	100 mg/m <sup>3</sup> (aerosol, inhalable dust, vapour)

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

**Personal protective equipment:**

Avoid all unnecessary exposure.

**Personal protective equipment symbol(s):**



##### 8.2.2.1. Eye and face protection

**Eye protection:**

Chemical goggles or safety glasses. Safety glasses

##### 8.2.2.2. Skin protection

**Skin and body protection:**

Wear suitable protective clothing

**Hand protection:**

Wear protective gloves.

##### 8.2.2.3. Respiratory protection

**Respiratory protection:**

Wear appropriate mask

##### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

**Environmental exposure controls:**

Avoid release to the environment.

**Other information:**

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: light yellow. amber. Conforms to standard.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 93 °C (closed cup) ASTM D7094
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 0.94
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Melonal (106-72-9)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
Triplal (Vertocitral) (68039-49-6)	
LD50 oral	3900 mg/kg bodyweight
Lemongrass oil (8007-02-1)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal	3127 mg/kg bodyweight
Nerol (106-25-2)	
LD50 oral rat	4500 mg/kg (Source: NLM_CIP)
LD50 oral	4500 mg/kg bodyweight

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Nerol (106-25-2)</b>	
LD50 dermal rabbit	> 5 g/kg (Source: NLM_CIP)
<b>Hydroxy (107-75-5)</b>	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
<b>cis-3-Hexenyl salicylate (65405-77-8)</b>	
LD50 oral rat	5 g/kg (Source: NLM_CIP)
LD50 oral	2500 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
<b>citral (5392-40-5)</b>	
LD50 oral rat	4960 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	2250 mg/kg (Source: NLM_CIP)
<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5)</b>	
LD50 oral rat	> 3250 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 3250 mg/kg (Source: CHEMVIEW)
<b>Helional (1205-17-0)</b>	
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
<b>Cyclamal (103-95-7)</b>	
LD50 oral rat	3810 mg/kg (Source: NLM_CIP)
LD50 oral	3810 mg/kg bodyweight
LD50 dermal rat	> 5000 mg/kg (Source: ECHA_API)
<b>Hexyl salicylate (6259-76-3)</b>	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
<b>Linalool (78-70-6)</b>	
LD50 oral	2790 mg/kg bodyweight
<b>Hexyl cinnamic aldehyde (101-86-0)</b>	
LD50 oral rat	3100 mg/kg (Source: NLM_CIP)
LD50 oral	3100 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg (Source: EPA_HP)
LC50 Inhalation - Rat	> 5 mg/l/4h
<b>Benzyl salicylate (118-58-1)</b>	
LD50 oral rat	2227 mg/kg (Source: NLM_CIP)
LD50 oral	2200 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
<b>Benzyl acetate (140-11-4)</b>	
LD50 oral rat	2490 mg/kg (Source: JAPAN_GHS)
LD50 oral	2490 mg/kg bodyweight

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Benzyl acetate (140-11-4)</b>	
LD50 dermal rabbit	> 5000 mg/kg (Source: JAPAN_GHS)
<b>3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol (103694-68-4)</b>	
LD50 oral	3440 mg/kg bodyweight
LD50 dermal rabbit	> 5 ml/kg (Source: ECHA_API)
<b>Carbitol (111-90-0)</b>	
LD50 oral rat	10502 mg/kg (Source: OECD_SIDS)
LD50 dermal rabbit	9143 mg/kg (Source: OECD_SIDS)
LC50 Inhalation - Rat	> 5240 mg/m <sup>3</sup> (Exposure time: 4 h Source: NLM_CIP)
<b>tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans) (63500-71-0)</b>	
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
Skin corrosion/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
<b>Benzyl acetate (140-11-4)</b>	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.  
Ecology - water : Toxic to aquatic life with long lasting effects.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>Nerol (106-25-2)</b>	
LC50 - Fish [1]	20.3 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
<b>citral (5392-40-5)</b>	
EC50 - Crustacea [1]	7 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	16 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	19 mg/l (Species: Desmodesmus subspicatus)
<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5)</b>	
LC50 - Fish [1]	0.452 mg/l Wolf, 1996d-27682
LC50 - Other aquatic organisms [1]	> 0.14 mg/l REACH DOSSIER Pimephales promelas
EC50 - Crustacea [2]	260 µg/l REACH Dossier
EC50 - Other aquatic organisms [1]	0.131 mg/l REACH Dossier
<b>Linalool (78-70-6)</b>	
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)
<b>Benzyl salicylate (118-58-1)</b>	
LC50 - Fish [1]	1.03 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
<b>Carbitol (111-90-0)</b>	
LC50 - Fish [1]	10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
LC50 - Fish [2]	19100 – 23900 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through] Source: EPA)
EC50 - Crustacea [1]	3940 – 4670 mg/l (Exposure time: 48 h - Species: Daphnia magna)
<b>12.2. Persistence and degradability</b>	
<b>Freesia</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.
<b>12.3. Bioaccumulative potential</b>	
<b>Freesia</b>	
Bioaccumulative potential	Not established.
<b>Melonal (106-72-9)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.4 (at 35 °C (at pH 7)
<b>Nerol (106-25-2)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 30 °C (at pH 6.5)
<b>Hydroxy (107-75-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	1.68 (at 25 °C)
<b>cis-3-Hexenyl salicylate (65405-77-8)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.8 (at 25 °C (at pH 7)
<b>citral (5392-40-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 25 °C)

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5)</b>	
BCF - Fish [1]	(1618 dimensionless (whole body w.w.))
Partition coefficient n-octanol/water (Log Pow)	5.3 (at 25 °C (at pH 7))
<b>Helional (1205-17-0)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C)
<b>Cyclamal (103-95-7)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.4 (at 35 °C)
<b>Hexyl salicylate (6259-76-3)</b>	
Partition coefficient n-octanol/water (Log Pow)	5.5 (at 30 °C (at pH 7))
<b>Benzyl salicylate (118-58-1)</b>	
Partition coefficient n-octanol/water (Log Pow)	4
<b>Benzyl acetate (140-11-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	1.96 (at 25 °C (at pH 7))
<b>3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol (103694-68-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.07 (at 20 °C)
<b>Carbitol (111-90-0)</b>	
Partition coefficient n-octanol/water (Log Pow)	-0.8
<b>tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans) (63500-71-0)</b>	
Partition coefficient n-octanol/water (Log Pow)	1.65 (at 23 °C (at pH >6.09-<6.74))

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container in accordance with local/national laws and regulations.  
Additional information : Handle empty containers with care because residual vapours are flammable.  
Ecology - waste materials : Avoid release to the environment.

# Freesia

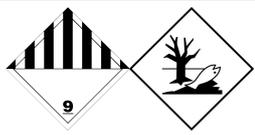
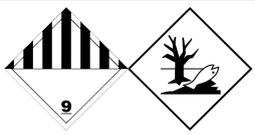
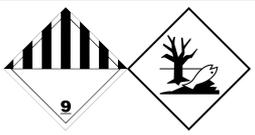
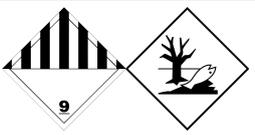
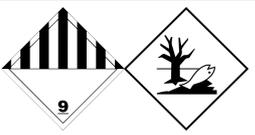
## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

HP Code	<p>: HP3 - "Flammable:"</p> <ul style="list-style-type: none"> <li>– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point &gt; 55 °C and ≤ 75 °C;</li> <li>– flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;</li> <li>– flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;</li> <li>– flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;</li> <li>– water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;</li> <li>– other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.</li> </ul> <p>HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment</p>
---------	---

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
<b>14.2. UN proper shipping name</b>				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate)	Environmentally hazardous substance, liquid, n.o.s. (Hexyl salicylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate)
<b>Transport document description</b>				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Hexyl salicylate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Hexyl salicylate), 9, III
<b>14.3. Transport hazard class(es)</b>				
9	9	9	9	9
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	:



Tunnel restriction code (ADR)	: -
EAC code	: •3Z

### Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197, A215
ERG code (IATA)	: 9L

### Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

### Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Freesia ; Melonal ; Triplal (Vertocitral) ; Lemongrass oil ; Nerol ; Hydroxy ; citral ; Helional ; Cyclamal ; Hexyl salicylate ; Linalool ; Hexyl cinnamic aldehyde ; Benzyl salicylate ; 3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol ; tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans)	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Freesia ; Triplal (Vertocitral) ; Lemongrass oil ; cis-3-Hexenyl salicylate ; 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) ; Helional ; Cyclamal ; Hexyl salicylate ; Hexyl cinnamic aldehyde ; Benzyl salicylate ; Benzyl acetate ; 3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

#### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).  
Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

ABM category : A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment  
SZW-lijst van kankerverwekkende stoffen : Triplal (Vertocitral),cis-3-Hexenyl salicylate are listed  
SZW-lijst van mutagene stoffen : Triplal (Vertocitral),cis-3-Hexenyl salicylate are listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

#### Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed  
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.  
Other information : None.

### Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3

# Freesia

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.