

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 1 of 10

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

##### 1.1. Product identifier

NATURAL GERANIOL

Substance name:	NATURAL GERANIOL
CAS No:	106-24-1
EC No:	203-377-1

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

###### **Use of the substance/mixture**

For Flavour use for food and feed only

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

Company name:	Axxence Aromatic GmbH	
Street:	Tackenweide 28	
Place:	D-46446 Emmerich am Rhein	
Telephone:	+ 49 2822 68561 0	Telefax: + 49 2822 68561 39
e-mail:	info@axxence.com	
Contact person:	Andreas Goertz	Telephone: + 49 2822 68561 37
e-mail:	andreas.goertz@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	QM - Regulatory Affairs	

##### 1.4. Emergency telephone number:

#### SECTION 2: Hazards identification

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

###### **Regulation (EC) No 1272/2008**

Skin Irrit. 2; H315  
 Eye Dam. 1; H318  
 Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### **Regulation (EC) No 1272/2008**

**Signal word:** Danger

**Pictograms:**



###### **Hazard statements**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

###### **Precautionary statements**

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 2 of 10

<p>P333+P313 P362+P364 P305+P351+P338  P310 P501</p>	<p>If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Dispose of contents/container to .</p>
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#### 2.3. Other hazards

No information available.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C10 H18 O  
Molecular weight: 154,25

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
106-24-1	NATURAL GERANIOL			100 %
	203-377-1			
	Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1; H315 H318 H317			

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

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
106-24-1	203-377-1	NATURAL GERANIOL	100 %
	dermal: LD50 = >5000 mg/kg; oral: LD50 = 3600 mg/kg		

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### **After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

##### **After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

##### **After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

##### **After ingestion**

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of water.

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

No information available.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**NATURAL GERANIOL**

Revision date: 21.11.2022

Product code: 250710

Page 3 of 10

**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.  
Carbon dioxide (CO<sub>2</sub>) / Extinguishing powder / alcohol resistant foam

**Unsuitable extinguishing media**

Water

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

Non-flammable.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.  
Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up****For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 4 of 10

#### Hints on joint storage

No special measures are necessary.

#### 7.3. Specific end use(s)

For Flavour use for food and feed only

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### DNEL/DMEL values

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
106-24-1	NATURAL GERANIOL		
Worker DNEL, long-term	inhalation	systemic	161,6 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	12,5 mg/kg bw/day
Worker DNEL, long-term	dermal	local	11,8 mg/cm <sup>2</sup>
Consumer DNEL, long-term	inhalation	systemic	47,8 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	7,5 mg/kg bw/day
Consumer DNEL, long-term	dermal	local	11,8 mg/cm <sup>2</sup>
Consumer DNEL, long-term	oral	systemic	13,75 mg/kg bw/day

##### PNEC values

CAS No	Name of agent	
Environmental compartment	Value	
106-24-1	NATURAL GERANIOL	
Freshwater	0,011 mg/l	
Freshwater (intermittent releases)	0,108 mg/l	
Marine water	0,001 mg/l	
Freshwater sediment	0,115 mg/kg	
Marine sediment	0,011 mg/kg	
Micro-organisms in sewage treatment plants (STP)	0,7 mg/l	
Soil	0,017 mg/kg	

#### 8.2. Exposure controls



##### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: goggles.

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 5 of 10

specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Skin protection

Use of protective clothing.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

## SECTION 9: Physical and chemical properties

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

Physical state:	Liquid
Colour:	
Melting point/freezing point:	-15 °C
Boiling point or initial boiling point and boiling range:	229 °C
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	108 °C
Auto-ignition temperature:	250 °C
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic: (at 20 °C)	9,23 mm <sup>2</sup> /s
Water solubility: (at 20 °C)	0,1 g/L
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	2,6
Vapour pressure: (at 20 °C)	0,3 hPa
Density (at 20 °C):	0,89 g/cm <sup>3</sup>
Relative vapour density: (at 20 °C)	5,33

### 9.2. Other information

#### Information with regard to physical hazard classes

Explosive properties

not explosive according to EU A.14

Oxidizing properties

The product is not: oxidising.

#### Other safety characteristics

Evaporation rate: not determined

Solid content: not determined

Viscosity / dynamic:  
(at 20 °C) 8,21 mPa·s

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 6 of 10

#### **10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

#### **10.3. Possibility of hazardous reactions**

No known hazardous reactions.

#### **10.4. Conditions to avoid**

none

#### **10.5. Incompatible materials**

No information available.

#### **10.6. Hazardous decomposition products**

No known hazardous decomposition products.

### SECTION 11: Toxicological information

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

##### **Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
106-24-1	NATURAL GERANIOL				
	oral	LD50 mg/kg 3600	Rat	REACH registration	
	dermal	LD50 mg/kg >5000	Rabbit	REACH registration	

##### **Irritation and corrosivity**

Causes skin irritation.

Causes serious eye damage.

##### **Sensitising effects**

May cause an allergic skin reaction. (NATURAL GERANIOL)

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

##### **STOT-single exposure**

Based on available data, the classification criteria are not met.

##### **STOT-repeated exposure**

Based on available data, the classification criteria are not met.

##### **Aspiration hazard**

Based on available data, the classification criteria are not met.

#### **11.2. Information on other hazards**

##### **Other information**

No information available.

##### **Further information**

This substance is classified as hazardous according to Regulation (EC) No 1272 (2008).

### SECTION 12: Ecological information

#### **12.1. Toxicity**

The product is not: Ecotoxic.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 7 of 10

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
106-24-1	NATURAL GERANIOL					
	Acute fish toxicity	LC50	22 mg/l	96 h	Danio rerio (zebrafish)	REACH Registration OECD 203
	Acute algae toxicity	ErC50 mg/l	13,1	72 h	Desmodesmus subspicatus	REACH Registration OECD 201
	Acute crustacea toxicity	EC50 mg/l	10,8	48 h	Daphnia magna (Big water flea)	REACH Registration OECD 202
	Acute bacteria toxicity	(EC50	70 mg/l)	0,5 h	Activated sludge	REACH Registration OECD 209

#### 12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
106-24-1	NATURAL GERANIOL			
	OECD 301A	90-100%	3	
	Readily biodegradable			

#### 12.3. Bioaccumulative potential

The product has not been tested.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
106-24-1	NATURAL GERANIOL	2,6

#### 12.4. Mobility in soil

The product has not been tested.

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

The product has not been tested.

#### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### 12.7. Other adverse effects

No information available.

#### Further information

Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

##### List of Wastes Code - residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

##### List of Wastes Code - used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 8 of 10

#### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

#### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

#### Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

#### Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

#### Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.6. Special precautions for user

No information available.

#### 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

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): 100 % (890 g/l)

2004/42/EC (VOC): 100 % (890 g/l)

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

##### Additional information

To follow: 850/2004/EC, 1107/2009/EC, 649/2012/EC

##### National regulatory information



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 9 of 10

<p>Employment restrictions:</p> <p>Water hazard class (D):</p> <p>Skin resorption/Sensitization:</p>	<p>Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).</p> <p>1 - slightly hazardous to water</p> <p>Causes allergic hypersensitivity reactions.</p>
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#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,11,12,13,14,15,16.

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

VOC: Volatile Organic Compounds

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

#### Relevant H and EUH statements (number and full text)

H315 Causes skin irritation.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### NATURAL GERANIOL

Revision date: 21.11.2022

Product code: 250710

Page 10 of 10

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

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

#### Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1	For Flavour use for food and feed only	-	-	-	-	-	-	-	Flavour

LCS: Life cycle stages

SU: Sectors of use

PC: Product categories

PROC: Process categories

ERC: Environmental release categories

AC: Article categories

TF: Technical functions