

**Trade name:** Duftstoff Apfel

**Product no.:** 176999

**Current version :** 1.0.0, issued: 28.10.2020

**Replaced version:** -, issued: -

**Region:** MT

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

### 1.1 Product identifier

**Trade name**

**Duftstoff Apfel**

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

**Relevant identified uses of the substance or mixture**

Fragrances

**Uses advised against**

No data available.

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

**Address**

Koch-Chemie GmbH

Einsteinstr. 42

D-59423 Unna

Telephone no. +49-2303-9 86 70-0

Fax no. +49-2303-9 86 70-26

### 1.4 Emergency telephone number

No data available.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Acute Tox. 4; H332

Aquatic Chronic 3; H412

Eye Irrit. 2; H319

Skin Irrit. 2; H315

Skin Sens. 1; H317

**Classification information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)**

**Hazard pictograms**



GHS07

**Signal word**

Warning

**Hazardous component(s) to be indicated on label:**

2-butoxyethanol

2,4-dimethylcyclohex-3-ene-1-carbaldehyde

citronellyl-formate

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H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statement(s)**

P261	Avoid breathing vapours/spray.
P280	Wear protective gloves/eye protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P501	Dispose of contents/container to a facility in accordance with local and national regulations.

**2.3 Other hazards**

## PBT assessment

According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be PBT.

## vPvB assessment

According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be vPvB.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable. The product is not a substance.

**3.2 Mixtures****Hazardous ingredients**

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration
			%
1	<b>2-butoxyethanol</b>		
	111-76-2 203-905-0 603-014-00-0 01-2119475108-36	Acute Tox. 4; H302 Acute Tox. 4; H312 Acute Tox. 4; H332 Eye Irrit. 2; H319 Skin Irrit. 2; H315	>= 50,00 - < 70,00 wt%
2	<b>cis-2-tert-butylcyclohexyl acetate</b>		
	20298-69-5 243-718-1 - 01-2119970713-33	Aquatic Chronic 2; H411	>= 5,00 - < 10,00 wt%
3	<b>undecan-4-olide</b>		
	104-67-6 203-225-4 - 01-2119959333-34	Aquatic Chronic 3; H412	< 2,50 wt%
4	<b>allyl-heptanoate</b>		
	142-19-8 205-527-1	Acute Tox. 3; H301 Acute Tox. 3; H311	< 2,50 wt%

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	- 01-2119488961-23	Aquatic Acute 1; H400 Aquatic Chronic 3; H412		
5	<b>2,4-dimethylcyclohex-3-ene-1-carbaldehyde</b>			
	68039-49-6 268-264-1 - -	Aquatic Chronic 2; H411 Skin Irrit. 2; H315 Skin Sens. 1B; H317	< 2,50	wt%
6	<b>citronellyl-formate</b>			
	105-85-1 203-338-9 - -	Skin Irrit. 2; H315 Skin Sens. 1B; H317	< 0,50	wt%
7	<b>1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran</b>			
	1222-05-5 214-946-9 603-212-00-7 -	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0,50	wt%
8	<b>allyl-hexanoate</b>			
	123-68-2 204-642-4 - 01-2119983573-26	Acute Tox. 3; H301 Acute Tox. 3; H311 Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 3; H412	< 0,50	wt%

Full Text for all H-phrases and EUH-phrases: pls. see section 16

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information**

Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. In case of allergic symptoms, especially respiratory tract related, seek medical help immediately.

**After inhalation**

Remove affected persons from dangerous area by observing suitable respiratory protection measures. Ensure supply of fresh air. Do not use mouth-to-mouth or mouth-to-nose resuscitation.

**After skin contact**

Wash off immediately with soap and water. Consult a doctor if skin irritation persists.

**After eye contact**

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Seek medical assistance.

**After ingestion**

Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor immediately.

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

No data available.

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

No data available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Water spray jet; Foam; Carbon dioxide; Dry chemical extinguisher

**Unsuitable extinguishing media**

High power water jet

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In the event of fire, the following can be released: Carbon dioxide (CO<sub>2</sub>); Carbon monoxide (CO)

**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear full protective suit. Run-off water from fire fighting must not be discharged into drains or enter surface water.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Use personal protective clothing.

**For emergency responders**

Personal protective equipment (PPE) - see section 8.

**6.2 Environmental precautions**

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. In case of entry into waterways, soil or drains, inform the responsible authorities.

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

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

**6.4 Reference to other sections**

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

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

Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances.

**General protective and hygiene measures**

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Do not inhale vapours. Avoid contact with eyes and skin. Wash hands before breaks and after work. Remove contaminated clothing and shoes and launder thoroughly before reusing. Have emergency shower available. Provide eye wash fountain in work area.

**7.2 Conditions for safe storage, including any incompatibilities****Technical measures and storage conditions**

Keep container tightly closed and dry in a cool, well-ventilated place.

**Requirements for storage rooms and vessels**

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

**Incompatible products**

Substances to be avoided, see section 10.

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
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1	2-butoxyethanol	111-76-2	203-905-0
<b>Occupational Exposure Limit Values (Schedule V, Occupational Health and Safety Authority Act)</b>			
2-Butoxyethanol			
	WEL short-term (15 min reference period)	246	mg/m <sup>3</sup> 50 ml/m <sup>3</sup>
	WEL long-term (8-hr TWA reference period)	98	mg/m <sup>3</sup> 20 ml/m <sup>3</sup>
<b>Occupational Exposure Limit Values (Schedule V, Occupational Health and Safety Authority Act)</b>			
2-Butoxyethanol			
	WEL short-term (15 min reference period)	246	mg/m <sup>3</sup> 50 ppm
	WEL long-term (8-hr TWA reference period)	98	mg/m <sup>3</sup> 20 ppm
	Comments	Skin	
<b>2000/39/EC</b>			
2-Butoxyethanol			
	WEL short-term (15 min reference period)	246	mg/m <sup>3</sup> 50 ppm
	WEL long-term (8-hr TWA reference period)	98	mg/m <sup>3</sup> 20 ppm
	Skin resorption / sensibilisation	Skin	

**DNEL, DMEL and PNEC values****DNEL values (worker)**

No	Substance name	Route of exposure	Exposure time	Effect	CAS / EC no	Value
1	2-butoxyethanol				111-76-2 203-905-0	
	dermal	Long term (chronic)		systemic		125,00 mg/kg/day
	dermal	Short term (acut)		systemic		89,00 mg/kg/day
	inhalative	Long term (chronic)		systemic		98,00 mg/m <sup>3</sup>
	inhalative	Short term (acut)		systemic		1091,00 mg/m <sup>3</sup>
	inhalative	Long term (chronic)		local		246,00 mg/m <sup>3</sup>
2	undecan-4-olide				104-67-6 203-225-4	
	dermal	Long term (chronic)		systemic		5,38 mg/kg/day
	inhalative	Long term (chronic)		systemic		19 mg/m <sup>3</sup>
3	allyl-heptanoate				142-19-8 205-527-1	
	dermal	Long term (chronic)		systemic		0,84 mg/kg/day
	inhalative	Long term (chronic)		systemic		2,97 mg/m <sup>3</sup>
4	allyl-hexanoate				123-68-2 204-642-4	
	dermal	Long term (chronic)		systemic		4,3 mg/kg/day
	inhalative	Long term (chronic)		systemic		15 mg/m <sup>3</sup>

**DNEL value (consumer)**

No	Substance name	Route of exposure	Exposure time	Effect	CAS / EC no	Value
1	2-butoxyethanol				111-76-2 203-905-0	
	oral	Long term (chronic)		systemic		6,30 mg/kg/day
	oral	Short term (acut)		systemic		26,70 mg/kg/day
	dermal	Long term (chronic)		systemic		75,00 mg/kg/day
	dermal	Short term (acut)		systemic		89,00 mg/kg/day
	inhalative	Long term (chronic)		systemic		59,00 mg/m <sup>3</sup>
	inhalative	Short term (acut)		systemic		426,00 mg/m <sup>3</sup>
	inhalative	Long term (chronic)		local		147,00 mg/m <sup>3</sup>
2	undecan-4-olide				104-67-6 203-225-4	
	oral	Long term (chronic)		systemic		2,7 mg/kg/day
	dermal	Long term (chronic)		systemic		2,7 mg/kg/day
	inhalative	Long term (chronic)		systemic		4,68 mg/m <sup>3</sup>

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3	<b>allyl-heptanoate</b>			<b>142-19-8</b> <b>205-527-1</b>	
	oral	Long term (chronic)	systemic	0,42	mg/kg/day
	dermal	Long term (chronic)	systemic	0,42	mg/kg/day
	inhalative	Long term (chronic)	systemic	0,73	mg/m <sup>3</sup>
4	<b>allyl-hexanoate</b>			<b>123-68-2</b> <b>204-642-4</b>	
	oral	Long term (chronic)	systemic	2,1	mg/kg/day
	dermal	Long term (chronic)	systemic	2,1	mg/kg/day
	inhalative	Long term (chronic)	systemic	3,7	mg/m <sup>3</sup>

## PNEC values

No	Substance name	CAS / EC no	
	ecological compartment	Type	Value
1	<b>2-butoxyethanol</b>		<b>111-76-2</b> <b>203-905-0</b>
	water	fresh water	8,80 mg/L
	water	marine water	0,88 mg/L
	water	fresh water sediment	34,60 mg/kg
	with reference to: dry weight		
	water	marine water sediment	3,46 mg/kg
	water	Aqua intermittent	26,4 mg/L
	soil	-	2,33 mg/kg dry weight
	sewage treatment plant	-	463,00 mg/L
	secondary poisoning	-	0,02 g/kg
2	<b>cis-2-tert-butylcyclohexyl acetate</b>		<b>20298-69-5</b> <b>243-718-1</b>
	water	fresh water	0,011 mg/L
	water	marine water	0,001 mg/L
	water	fresh water sediment	1,5 mg/kg dry weight
	water	marine water sediment	0,15 mg/kg dry weight
	soil	-	0,293 mg/kg dry weight
	sewage treatment plant	-	10 mg/L
3	<b>undecan-4-olide</b>		<b>104-67-6</b> <b>203-225-4</b>
	water	fresh water	5,85 µg/L
	water	marine water	0,585 µg/L
	water	Aqua intermittent	0,0585 mg/L
	water	fresh water sediment	0,628 mg/kg dry weight
	water	marine water sediment	0,0628 mg/kg dry weight
	soil	-	0,122 mg/kg dry weight
	sewage treatment plant	-	80 mg/L
	secondary poisoning	-	66,7 mg/kg food
4	<b>allyl-heptanoate</b>		<b>142-19-8</b> <b>205-527-1</b>
	water	fresh water	0,12 µg/L
	water	marine water	0,012 µg/L
	water	fresh water sediment	0,012 mg/kg dry weight
	water	marine water sediment	0,001 mg/kg dry weight

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	soil	-	0,002	mg/kg dry weight
	sewage treatment plant	-	10	mg/L
5	<b>allyl-hexanoate</b>		<b>123-68-2</b> <b>204-642-4</b>	
	water	fresh water	0,117	µg/L
	water	marine water	0,012	µg/L
	water	fresh water sediment	4,46	µg/kg
	water	marine water sediment	0,446	µg/kg
	soil	-	0,825	µg/kg
	sewage treatment plant	-	10	mg/L
	secondary poisoning	-	47,56	mg/kg food

## 8.2 Exposure controls

### Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn.

### Personal protective equipment

#### Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified. Filter A or environment-independent breathing apparatus.

#### Eye / face protection

Safety glasses with side protection shield (EN 166)

#### Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific workstation suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material

butyl rubber

Material thickness

0,5 mm

Breakthrough time

>

120 min

#### Other

Chemical-resistant work clothes.

#### Environmental exposure controls

No data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form/Colour</b>
liquid
colourless
<b>Odour</b>
fruity
<b>Odour threshold</b>
No data available
<b>pH value</b>
Not applicable
<b>Boiling point / boiling range</b>

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No data available			
<b>Melting point / melting range</b>			
No data available			
<b>Decomposition point / decomposition range</b>			
No data available			
<b>Flash point</b>			
Value	>	61	°C
<b>Auto-ignition temperature</b>			
No data available			
<b>Oxidising properties</b>			
not oxidizing			
<b>Explosive properties</b>			
Product does not present an explosion hazard.			
<b>Flammability (solid, gas)</b>			
No data available			
<b>Lower flammability or explosive limits</b>			
No data available			
<b>Upper flammability or explosive limits</b>			
No data available			
<b>Vapour pressure</b>			
No data available			
<b>Vapour density</b>			
No data available			
<b>Evaporation rate</b>			
No data available			
<b>Relative density</b>			
No data available			
<b>Density</b>			
Value		0,93	g/cm <sup>3</sup>
Reference temperature		20	°C
<b>Solubility in water</b>			
Comments	miscible		
<b>Solubility(ies)</b>			
No data available			
<b>Partition coefficient: n-octanol/water</b>			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
log Pow			0,81
Reference temperature			25 °C
Source		ECHA	
2	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
log Pow		4,7	- 4,8
Reference temperature			25 °C
Method		OECD 117	
Source		ECHA	
3	undecan-4-olide	104-67-6	203-225-4
log Pow			3,6
Reference temperature			25 °C



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Method	OECD 117		
Source	ECHA		
<b>4</b>	<b>allyl-heptanoate</b>	<b>142-19-8</b>	<b>205-527-1</b>
log Pow		3,97	
Reference temperature		20	°C
Source	ECHA		

**Viscosity**

No data available

**9.2 Other information****Other information**

No data available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No data available.

**10.2 Chemical stability**

Stable under recommended storage and handling conditions (See section 7).

**10.3 Possibility of hazardous reactions**

Dangerous reactions are not to be expected when handling product according to its intended use.

**10.4 Conditions to avoid**

None known

**10.5 Incompatible materials**

strong oxidizing agents; light metals

**10.6 Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

<b>Acute oral toxicity (result of the ATE calculation for the mixture)</b>	
No	Product Name
1	Duftstoff Apfel
Comments	The result of the applied calculation method according to the European Regulation (EC) 1272/2008 (CLP), Paragraph 3.1.3.6, Part 3 of Annex I is outside the values that imply a classification / labelling of this mixture according to table 3.1.1 defining the respective categories (ATE oral > 2000 mg/kg).

<b>Acute oral toxicity</b>			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
LD50		1746	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		
<b>2</b>	<b>cis-2-tert-butylcyclohexyl acetate</b>	<b>20298-69-5</b>	<b>243-718-1</b>
LD50		4600	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		
<b>3</b>	<b>allyl-heptanoate</b>	<b>142-19-8</b>	<b>205-527-1</b>
LD50		218	mg/kg bodyweight

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Species	rat
Method	OECD 401
Source	ECHA

**Acute dermal toxicity (result of the ATE calculation for the mixture)**

No	Product Name
1	Duftstoff Apfel
Comments	The result of the applied calculation method according to the European Regulation (EC) 1272/2008 (CLP), Paragraph 3.1.3.6, Part 3 of Annex I is outside the values that imply a classification / labelling of this mixture according to table 3.1.1 defining the respective categories (ATE dermal > 2000 mg/kg).

**Acute dermal toxicity**

No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
LD50	>	2000	mg/kg bodyweight
Species	guinea pig		
Method	OECD 402		
Source	ECHA		
2	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
LD50	>	5000	mg/kg bodyweight
Species	rabbit		
Method	OECD 402		
Source	ECHA		
3	undecan-4-olide	104-67-6	203-225-4
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
4	allyl-heptanoate	142-19-8	205-527-1
LD50	>	810	mg/kg bodyweight
Species	rabbit		
Method	OECD 402		
Source	ECHA		

**Acute inhalational toxicity (result of the ATE calculation for the mixture)**

No	Product Name
1	Duftstoff Apfel
ATE (Mixture)	3,0000 mg/l
Route of exposure / physical form	Dust/mist
Method	Calculation method according Regulation (EC) No 1272/2008, (CLP), annex I, part 3, section 3.1.3.6.

**Acute inhalational toxicity**

No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
ATE		1,5	mg/l
Duration of exposure		4	h
State of aggregation	Dust/mist		
Species	rat		

**Skin corrosion/irritation**

No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
Duration of exposure		4	h
Species	rabbit		
Method	EU B.4		
Source	ECHA		
Evaluation	irritant		
2	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1

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Species	rabbit
Method	OECD 404
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
<b>3</b>	<b>allyl-heptanoate</b> <b>142-19-8</b> <b>205-527-1</b>
Method	440/2008/EC B.46.
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.

Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
<b>1</b>	<b>2-butoxyethanol</b>	<b>111-76-2</b>	<b>203-905-0</b>
Duration of exposure		24	h
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	Irritating to eyes		
<b>2</b>	<b>cis-2-tert-butylcyclohexyl acetate</b>	<b>20298-69-5</b>	<b>243-718-1</b>
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
<b>3</b>	<b>undecan-4-olide</b>	<b>104-67-6</b>	<b>203-225-4</b>
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation	non-irritant		
<b>4</b>	<b>allyl-heptanoate</b>	<b>142-19-8</b>	<b>205-527-1</b>
Species	rabbit		
Method	OECD 405		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
<b>1</b>	<b>2-butoxyethanol</b>	<b>111-76-2</b>	<b>203-905-0</b>
Route of exposure		Skin	
Species	guinea pig		
Method	OECD 406		
Source	ECHA		
Evaluation	non-sensitizing		
<b>2</b>	<b>allyl-heptanoate</b>	<b>142-19-8</b>	<b>205-527-1</b>
Route of exposure		Skin	
Species	guinea pig		
Method	OECD 406		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
<b>1</b>	<b>2-butoxyethanol</b>	<b>111-76-2</b>	<b>203-905-0</b>
Method	OECD 471		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
<b>2</b>	<b>undecan-4-olide</b>	<b>104-67-6</b>	<b>203-225-4</b>
Species	mouse		
Method	OECD 474		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

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Reproduction toxicity	
No data available	

Carcinogenicity			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
Species		rat	
Method		OECD 451	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

STOT - single exposure	
No data available	

STOT - repeated exposure	
No data available	

Aspiration hazard	
No data available	

## SECTION 12: Ecological information

## 12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
LC50		>	1474 mg/l
Duration of exposure		96	h
Species		Oncorhynchus mykiss	
Method		OECD 203	
Source		ECHA	
2	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
LC50		5,6	mg/l
Duration of exposure		96	h
Species		Danio rerio	
Method		EU C.1	
Source		ECHA	
3	allyl-heptanoate	142-19-8	205-527-1
LC50		0,117	mg/l
Duration of exposure		96	h
Species		Danio rerio	
Method		OECD 203	
Source		ECHA	

Toxicity to fish (chronic)			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
NOEC		>	100 mg/l
Duration of exposure		21	day(s)
Species		Danio rerio	
Method		OECD 204	
Source		ECHA	

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
EC50		1550	mg/l
Duration of exposure		48	h
Species		Daphnia magna	

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Method	OECD 202		
Source	ECHA		
<b>2</b>	<b>cis-2-tert-butylcyclohexyl acetate</b>	<b>20298-69-5</b>	<b>243-718-1</b>
EC50		17	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	EU C.2		
Source	ECHA		
<b>3</b>	<b>undecan-4-olide</b>	<b>104-67-6</b>	<b>203-225-4</b>
EC50		5,85	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	EU Method C.2		
Source	ECHA		
<b>4</b>	<b>allyl-heptanoate</b>	<b>142-19-8</b>	<b>205-527-1</b>
EC50		0,89	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		

**Toxicity to Daphnia (chronic)**

No	Substance name	CAS no.	EC no.
<b>1</b>	<b>2-butoxyethanol</b>	<b>111-76-2</b>	<b>203-905-0</b>
NOEC		100	mg/l
Duration of exposure		21	day(s)
Species	Daphnia magna		
Method	OECD 211		
Source	ECHA		
<b>2</b>	<b>undecan-4-olide</b>	<b>104-67-6</b>	<b>203-225-4</b>
NOEC		1,38	mg/l
Duration of exposure		21	day(s)
Species	Daphnia magna		
Method	OECD 211		
Source	ECHA		

**Toxicity to algae (acute)**

No	Substance name	CAS no.	EC no.
<b>1</b>	<b>2-butoxyethanol</b>	<b>111-76-2</b>	<b>203-905-0</b>
EC50		911	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		
<b>2</b>	<b>cis-2-tert-butylcyclohexyl acetate</b>	<b>20298-69-5</b>	<b>243-718-1</b>
EC50		4,2	mg/l
Duration of exposure		72	h
Species	Scenedesmus subspicatus		
Method	OECD 201		
Source	ECHA		
<b>3</b>	<b>undecan-4-olide</b>	<b>104-67-6</b>	<b>203-225-4</b>
ErC50		5,94	mg/l
Duration of exposure		48	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		

**Toxicity to algae (chronic)**

No	Substance name	CAS no.	EC no.
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1	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
NOEC		0,57	mg/l
Duration of exposure		72	h
Species	Scenedesmus subspicatus		
Method	OECD 201		
Source	ECHA		

Bacteria toxicity			
No	Substance name	CAS no.	EC no.
1	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
NOEC		100	
Duration of exposure		61	day(s)
Species	activated sludge		
Method	OECD 301 F		
Source	ECHA		

## 12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
Type	aerobic biodegradation		
Value		90,4	%
Duration		28	day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	readily biodegradable		
2	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
Value		43	%
Duration		28	day(s)
Method	OECD 301 F		
Source	ECHA		
Evaluation	not readily biodegradable		

## 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water			
No	Substance name	CAS no.	EC no.
1	2-butoxyethanol	111-76-2	203-905-0
log Pow		0,81	
Reference temperature		25	°C
Source	ECHA		
2	cis-2-tert-butylcyclohexyl acetate	20298-69-5	243-718-1
log Pow		4,7 - 4,8	
Reference temperature		25	°C
Method	OECD 117		
Source	ECHA		
3	undecan-4-olide	104-67-6	203-225-4
log Pow		3,6	
Reference temperature		25	°C
Method	OECD 117		
Source	ECHA		
4	allyl-heptanoate	142-19-8	205-527-1
log Pow		3,97	
Reference temperature		20	°C
Source	ECHA		

## 12.4 Mobility in soil

No data available.

## 12.5 Results of PBT and vPvB assessment

**Trade name:** Duftstoff Apfel**Product no.:** 176999**Current version :** 1.0.0, issued: 28.10.2020**Replaced version:** -, issued: -**Region:** MT**Results of PBT and vPvB assessment**

PBT assessment	According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be PBT.
vPvB assessment	According to the information provided in the supply chain, the mixture does not contain > 0.1% of a substance that is considered to be vPvB.

**12.6 Other adverse effects**

No data available.

**12.7 Other information****Other information**

Do not discharge into the drains or waters and do not store on public depositories.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

**Packaging**

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

**SECTION 14: Transport information****14.1 Transport ADR/RID/ADN**

The product is not subject to ADR/RID/ADN regulations.

**14.2 Transport IMDG**

The product is not subject to IMDG regulations.

**14.3 Transport ICAO-TI / IATA**

The product is not subject to ICAO-TI / IATA regulations.

**14.4 Other information**

No data available.

**14.5 Environmental hazards**

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

**14.6 Special precautions for user**

No data available.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not relevant

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations**

**Trade name:** Duftstoff Apfel**Product no.:** 176999**Current version :** 1.0.0, issued: 28.10.2020**Replaced version:** -, issued: -**Region:** MT**Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

**REACH candidate list of substances of very high concern (SVHC) for authorisation**

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

**Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES**

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.	No 3
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**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is not subject to Part 1 or 2 of Annex I.

**Other regulations**

Adhere to the national sanitary and occupational safety regulations when using this product.  
Employment restrictions, according to the regulations for protection of expectant and nursing mothers and the youth health and safety regulations, serving to protect against hazardous materials, should be observed.

**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out for this mixture.

**SECTION 16: Other information****Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

**Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H331	Toxic if inhaled.
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.

**Creation of the safety data sheet**

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This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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