

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830



AIRCLEAN

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

1.1. Product identifier

Product name : AIRCLEAN
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Detergent according to Regulation (EC) No 648/2004
Air conditioning cleansing product

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
☎ +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
☎ +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	category 1	H222: Extremely flammable aerosol.
Aerosol	category 1	H229: Pressurised container: May burst if heated.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.2. Label elements



Contains: propan-2-ol.

Signal word Danger

H-statements

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

P-statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear eye protection
P312	Call a POISON CENTER/doctor if you feel unwell.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.

Supplemental information

EUH208	Contains: glyoxal. May produce an allergic reaction.
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2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
propan-2-ol 01-2119457558-25	67-63-0 200-661-7	C>30%	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent
carbon dioxide	124-38-9 204-696-9	C<5%		(2)(I)	Constituent
glyoxal	107-22-2 203-474-9	C<1%	Muta. 2; H341 Skin Sens. 1; H317 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319	(1)(2)(10)	Constituent
didecyltrimethylammonium chloride	7173-51-5 230-525-2	C<1%	Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	(1)(9)	Constituent

(1) For H-statements in full: see heading 16

(2) Substance with a Community workplace exposure limit

(9) M-factor, see heading 16

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

(I) Exempted from registration under REACH in Annex IV (Regulation (EC) No 1907/2006)

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Do not apply (chemical) neutralizing agents without medical advice. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Immediately after ingestion: give lots of water to drink. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Narcosis.

After skin contact:

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher.

5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting CO2 extinguisher, Water (water can be used to control jet flame), Foam.

Major fire: Water (water can be used to control jet flame), Foam.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (hydrofluoric acid, carbon monoxide - carbon dioxide) and formation of small quantities of nitrous vapours and hydrogen chloride. Pressurised container: May burst if heated.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective goggles. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Dam up the liquid spill.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe strict hygiene.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Fireproof storeroom. Ventilation at floor level. Keep only in the original container. Keep out of direct sunlight. Meet the legal requirements. Max. storage time: > 365 day(s).

7.2.2 Keep away from:

Heat sources, ignition sources, (strong) acids, (strong) bases, oxidizing agents, reducing agents.

7.2.3 Suitable packaging material:

Aerosol.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

Carbon dioxide	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	5000 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	9000 mg/m ³

Belgium

Alcool isopropylique	Time-weighted average exposure limit 8 h	200 ppm
	Time-weighted average exposure limit 8 h	500 mg/m ³
	Short time value	400 ppm
	Short time value	1000 mg/m ³
Carbone (dioxyde de)	Time-weighted average exposure limit 8 h	5000 ppm (A)
	Time-weighted average exposure limit 8 h	9131 mg/m ³ (A)
	Short time value	30000 ppm (A)
	Short time value	54784 mg/m ³ (A)
Glyoxal (vapeur et aérosol)	Time-weighted average exposure limit 8 h	0.1 mg/m ³

La mention "A" signifie que l'agent libère un gaz ou une vapeur qui n'ont en eux-mêmes aucun effet physiologique mais peuvent diminuer le taux d'oxygène dans l'air. Lorsque le taux d'oxygène descend en dessous de 17-18 % (vol/vol) le manque d'oxygène provoque des suffocations qu'aucun symptôme préalable n'annonce

The Netherlands

Kooldioxide	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	4919 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	9000 mg/m ³

France

Alcool isopropylique	Short time value (VL: Valeur non réglementaire indicative)	400 ppm
	Short time value (VL: Valeur non réglementaire indicative)	980 mg/m ³
Carbone (dioxyde de)	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	5000 ppm
	Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative)	9000 mg/m ³

Germany

Kohlenstoffdioxid	Time-weighted average exposure limit 8 h (TRGS 900)	5000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	9100 mg/m ³
Propan-2-ol	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	500 mg/m ³

UK

Carbon dioxide	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	5000 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	9150 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	15000 ppm
	Short time value (Workplace exposure limit (EH40/2005))	27400 mg/m ³
Propan-2-ol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	400 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	999 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	500 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1250 mg/m ³

USA (TLV-ACGIH)

2-propanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm
	Short time value (TLV - Adopted Value)	400 ppm
Carbon dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	5000 ppm
	Short time value (TLV - Adopted Value)	30000 ppm
Glyoxal	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.1 mg/m ³ (IFV)

(IFV): Inhalable fraction and vapor

b) National biological limit values

If limit values are applicable and available these will be listed below.

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Germany

Propan-2-ol (Aceton)	Urin: expositionsende, bzw. schichtende	25 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Propan-2-ol (Aceton)	Vollblut: expositionsende, bzw. schichtende	25 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Vitamin K-Antagonisten (Quick-Wert)	Vollblut: keine beschränkung	Reduktion auf nicht weniger als 70%	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

USA (BEI-ACGIH)

2-Propanol (Acetone)	Urine: end of shift at end of workweek	40 mg/L	
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8.1.2 Sampling methods

Product name	Test	Number
Carbon Dioxide	NIOSH	6603
Carbon Dioxide	OSHA	ID 172
Isopropanol (Volatile Organic compounds)	NIOSH	2549
Isopropyl Alcohol (Alcohols I)	NIOSH	1400
Isopropyl Alcohol	OSHA	109

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

propan-2-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	500 mg/m ³	
	Long-term systemic effects dermal	888 mg/kg bw/day	

glyoxal

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2.96 mg/m ³	
	Acute local effects inhalation	8.9 mg/m ³	
	Long-term local effects inhalation	40 µg/m ³	
	Long-term systemic effects dermal	6.6 mg/kg bw/day	

didecyldimethylammonium chloride

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	18.2 mg/m ³	
	Long-term systemic effects dermal	8.6 mg/kg bw/day	

DNEL/DMEL - General population

propan-2-ol

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	89 mg/m ³	
	Long-term systemic effects dermal	319 mg/kg bw/day	
	Long-term systemic effects oral	26 mg/kg bw/day	

glyoxal

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.44 mg/m ³	
	Acute systemic effects inhalation	1.32 mg/m ³	
	Long-term local effects inhalation	10 µg/m ³	
	Long-term systemic effects dermal	2.3 mg/kg bw/day	
	Long-term systemic effects oral	0.15 mg/m ³	

PNEC

propan-2-ol

Compartments	Value	Remark
Fresh water	140.9 mg/l	
Marine water	140.9 mg/l	
Fresh water (intermittent releases)	140.9 mg/l	
STP	2251 mg/l	
Fresh water sediment	552 mg/kg sediment dw	
Marine water sediment	552 mg/kg sediment dw	
Soil	28 mg/kg soil dw	
Oral	160 mg/kg food	

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glyoxal

Compartments	Value	Remark
Fresh water	0.319 mg/l	
Marine water	0.032 mg/l	
Aqua (intermittent releases)	1.1 mg/l	
STP	4.1 mg/l	
Fresh water sediment	0.685 mg/kg sediment dw	
Marine water sediment	0.069 mg/kg sediment dw	
Soil	6.3 mg/kg soil dw	

didecyldimethylammonium chloride

Compartments	Value	Remark
Fresh water	2 µg/l	
Marine water	0.2 µg/l	
Aqua (intermittent releases)	0.29 µg/l	
STP	0.595 mg/l	
Fresh water sediment	2.82 mg/kg sediment dw	
Marine water sediment	0.28 mg/kg sediment dw	
Soil	1.4 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Gloves.

Materials	Measured breakthrough time	Thickness	Protection index
viton	> 480 minutes	0.7 mm	Class 6

- materials (excellent resistance)

Viton.

c) Eye protection:

Protective goggles.

d) Skin protection:

Head/neck protection. Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Aerosol
Odour	Characteristic odour
Odour threshold	No data available
Colour	Colourless
Particle size	No data available
Explosion limits	No data available
Flammability	Extremely flammable aerosol.
Log Kow	Not applicable (mixture)
Dynamic viscosity	1 mPa.s ; 20 °C
Kinematic viscosity	1 mm ² /s ; 40 °C
Melting point	No data available
Boiling point	-57 °C - 104 °C
Evaporation rate	1.3 ; Butyl acetate
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	Water ; complete
Relative density	0.79 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Flash point	11 °C

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Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5. Incompatible materials

(strong) acids, (strong) bases, oxidizing agents, reducing agents.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (hydrofluoric acid, carbon monoxide - carbon dioxide) and formation of small quantities of nitrous vapours and hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	5840 mg/kg bw		Rat	Experimental value	
Dermal	LD50	Equivalent to OECD 402	16400 ml/kg bw	24 h	Rabbit	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 10000 ppm	6 h	Rat (male / female)	Experimental value	

glyoxal

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	3300 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	Equivalent to OECD 402	> 2000 mg/kg	24 h	Rat (male / female)	Experimental value	Aqueous solution
Inhalation (aerosol)	LC50	OECD 403	2.44 mg/l	4 h	Rat (male / female)	Experimental value	Aqueous solution

didecyldimethylammonium chloride

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	329 mg/kg bw		Rat (male / female)	QSAR	
Dermal	LD50	OECD 402	> 1000 mg/kg bw		Rat (male / female)	Experimental value	
Inhalation						Data waiving	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

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No (test)data on the mixture available

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AIRCLEAN

Classification is based on the relevant ingredients

propan-2-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	Equivalent to OECD 405		24 hours	Rabbit	Experimental value	Single treatment
Skin	Not irritating		4 h	4; 24; 48; 72 hours	Rabbit	Experimental value	

glyoxal

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Aqueous solution
Eye	Irritating; category 2					Annex VI	
Skin	Not irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	Aqueous solution
Skin	Not corrosive	OECD 431	1 h	3 minutes; 1 hr	Reconstructed human epidermis	Experimental value	Aqueous solution
Skin	Irritating; category 2					Annex VI	
Inhalation	Irritating	OECD 412	4 weeks (6h/day, 5 days/week)		Rat	Experimental value	

didecyldimethylammonium chloride

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye						Data waiving	
Skin	Corrosive	OECD 404	3 minutes - 60 minutes	1; 24; 48; 72 hrs; 7; 14 days	Rabbit	Experimental value	

Conclusion

Causes serious eye irritation.
 Not classified as irritating to the skin
 Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

AIRCLEAN

No (test)data on the mixture available
 Judgement is based on the relevant ingredients

propan-2-ol

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406		24; 48 hours	Guinea pig (male / female)	Experimental value	

glyoxal

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406		48 hours	Guinea pig (female)	Experimental value	Aqueous solution

didecyldimethylammonium chloride

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406			Guinea pig (female)	Experimental value	
Inhalation						Data waiving	

Conclusion

Not classified as sensitizing for skin
 Not classified as sensitizing for inhalation

Specific target organ toxicity

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No (test)data on the mixture available
 Classification is based on the relevant ingredients

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propan-2-ol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	OECD 451	5000 ppm		No effect	104 weeks (6h/day, 5 days/week)	Rat (male / female)	Experimental value
Inhalation (vapours)	Dose level	Equivalent to OECD 403	5000 ppm	Central nervous system	Drowsiness, dizziness	6 h	Rat (male / female)	Experimental value

glyoxal

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (drinking water)	NOAEL	OECD 453	25 mg/kg bw/day		No adverse systemic effects	24 month(s)	Rat (male / female)	Experimental value
Dermal	NOAEL local effects	Subacute toxicity test	63 mg/kg bw/day	Skin	No effect	2 weeks (daily)	Mouse (male)	Experimental value
Inhalation	NOAEL	OECD 412	0.0006 mg/l air	Respiratory tract	No effect	4 weeks (6h/day, 5 days/week)	Rat (male / female)	Experimental value
Inhalation	LOAEL	OECD 412	0.002 mg/l air	Respiratory tract	Histopathological changes	4 weeks (6h/day, 5 days/week)	Rat (male / female)	Experimental value

didecyldimethylammonium chloride

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	OECD 453	31 mg/kg bw/day		No effect	52 weeks (daily)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

Conclusion

May cause drowsiness or dizziness.
Not classified for subchronic toxicity

Mutagenicity (in vitro)

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No (test)data on the mixture available

propan-2-ol

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

glyoxal

Result	Method	Test substrate	Effect	Value determination
Ambiguous	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value
Positive with metabolic activation, positive without metabolic activation	OECD 471	Bacteria (S.typhimurium)	Increased number of mutant colonies	Experimental value

didecyldimethylammonium chloride

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Mutagenicity (in vivo)

AIRCLEAN

No (test)data on the mixture available
Judgement is based on the relevant ingredients

propan-2-ol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 474		Mouse (male / female)		Experimental value

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Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 486		Rat (male / female)		Experimental value

Conclusion

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Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOEL	OECD 451	5000 ppm	104 weeks (6h/day, 5 days/week)	Rat (male / female)	No carcinogenic effect		Experimental value

glyoxal

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (drinking water)	NOAEL	OECD 453	> 300 mg/kg bw/day	24 month(s)	Rat (male / female)	No carcinogenic effect		Experimental value

didecyldimethylammonium chloride

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	Dose level	OECD 453	66.1 mg/kg bw/day	104 weeks (daily)	Rat (male)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

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No (test) data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	400 mg/kg bw/day	10 day(s)	Rat	No effect	Foetus	Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	400 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL	Equivalent to OECD 415	853 mg/kg bw/day	21 day(s) - 70 day(s)	Rat (male / female)	No effect		Experimental value

glyoxal

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	125 mg/kg bw/day	142 weeks (daily)	Rat	No effect		Experimental value
Maternal toxicity	NOAEL	OECD 414	25 mg/kg bw/day	2 weeks (daily)	Rat	No effect		Experimental value
Effects on fertility	NOAEL	OECD 416	400 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

didecyldimethylammonium chloride

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	12 mg/kg bw/day	24 day(s)	Rabbit	No effect		Experimental value
Maternal toxicity	NOAEL	OECD 414	4 mg/kg bw/day	24 day(s)	Rabbit (female)	No effect		Experimental value
Effects on fertility	NOEL	OECD 416	109 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

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No (test) data on the mixture available

Chronic effects from short and long-term exposure

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Skin rash/inflammation.

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SECTION 12: Ecological information

12.1. Toxicity

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No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

propan-2-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	9640 mg/l - 10000 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	LC50	Equivalent to OECD 202	> 10000 mg/l	24 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	Toxicity threshold		1800 mg/l	7 day(s)	Scenedesmus quadricauda	Static system	Fresh water	Experimental value; Toxicity test
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC		2344 µmol/l	16 day(s)	Daphnia magna		Fresh water	Experimental value; Growth
Toxicity aquatic micro-organisms	Toxicity threshold	Equivalent to DIN 38412/8	1050 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value; Toxicity test
	EC50	ISO 8192	41676 mg/l	30 minutes	Activated sludge			Experimental value

carbon dioxide

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		35 mg/l	96 h	Salmo gairdneri			Literature study; Lethal

glyoxal

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	DIN 38412-15	464 mg/l - 681 mg/l	96 h	Leuciscus idus	Static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	EU Method C.2	404 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EC50	EU Method C.3	> 100 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; GLP
	NOEC	EU Method C.3	3.13 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; GLP
Long-term toxicity fish	NOEC	OECD 210	112 mg/l	34 day(s)	Pimephales promelas	Flow-through system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	3.19 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC50	DIN 38412-8	102 mg/l	16 h	Pseudomonas putida	Static system	Fresh water	Experimental value; GLP

didecyldimethylammonium chloride

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	0.49 mg/l	96 h	Danio rerio	Semi-static system		Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	0.029 mg/l	48 h	Daphnia magna	Static system		Experimental value; GLP
Toxicity algae and other aquatic plants	ErC50	OECD 201	0.062 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.021 mg/l	21 day(s)	Daphnia magna	Semi-static system		Experimental value; GLP
Toxicity aquatic micro-organisms	EC50	OECD 209	17.9 mg/l	3 h	Activated sludge	Static system	Fresh water	Experimental value; GLP

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

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propan-2-ol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301E: Modified OECD Screening Test	95 %	21 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	17.668 h	1500000 /cm ³	Calculated value

glyoxal

Biodegradation water

Method	Value	Duration	Value determination
OECD 301A: DOC Die-Away Test	90 % - 100 %; GLP	19 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN	11.2 h	1500000 /cm ³	Calculated value

Biodegradation soil

Method	Value	Duration	Value determination
ISO 11266	72 %; GLP	49 day(s)	Experimental value

didecyldimethylammonium chloride

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B: CO2 Evolution Test	67 % - 71 %; GLP	28 day(s)	Experimental value

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
EU Method C.7	≥ 1 year(s); GLP	Primary degradation	Experimental value

Conclusion

Does not contain any not readily biodegradable component(s)

12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

propan-2-ol

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.05	25 °C	Weight of evidence approach

carbon dioxide

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.83		Experimental value

glyoxal

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFWIN	3.2			QSAR

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		-1.15	23 °C	Experimental value

didecyldimethylammonium chloride

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	Other	81.00	46 day(s)	Lepomis macrochirus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		-0.41 - 2.58	20 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

propan-2-ol

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	0.185 - 0.541	Calculated value

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glyoxal

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	0.32	Experimental value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	4 %				96 %	Calculated value

didecyldimethylammonium chloride

(log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 106	2.82 - 4.39	Experimental value

Conclusion

Contains component(s) that adsorb(s) into the soil
Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

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Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Contains component(s) included in the list of substances which may contribute to the greenhouse effect (IPCC)
None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

propan-2-ol

Groundwater

Groundwater pollutant

carbon dioxide

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Included in the list of substances which may contribute to the greenhouse effect (IPCC)

glyoxal

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
20 01 29* (separately collected fractions (except 15 01): detergents containing hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Recycle/reuse. Specific treatment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

Proper shipping name	Aerosols
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14.3. Transport hazard class(es)

Hazard identification number	
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Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Hazard identification number	23
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2
Classification code	5F
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	
Environmentally hazardous substance mark	no
14.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1. UN number	
UN number	1950
14.2. UN proper shipping name	
Proper shipping name	Aerosols
14.3. Transport hazard class(es)	
Class	2.1
14.4. Packing group	
Packing group	
Labels	2.1
14.5. Environmental hazards	

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Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	381
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

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

Annex II of MARPOL 73/78	Not applicable
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Air (ICAO-TI/IATA-DGR)

14.1. UN number

UN number	1950
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14.2. UN proper shipping name

Proper shipping name	Aerosols, flammable
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14.3. Transport hazard class(es)

Class	2.1
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14.4. Packing group

Packing group	
Labels	2.1

14.5. Environmental hazards

Environmentally hazardous substance mark	no
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14.6. Special precautions for user

Special provisions	A145
Special provisions	A167
Special provisions	A802
Limited quantities: maximum net quantity per packaging	30 kg G

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
93.10 %	
739.799 g/l	

Ingredients according to Regulation (EC) No 648/2004 and amendments

<5% disinfectants, <5% cationic surfactants, perfumes

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
propan-2-ol glyoxal	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) 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; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public

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		<p>are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";</p> <p>c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.</p> <p>6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.</p> <p>7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'</p>
propan-2-ol	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	<p>1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:</p> <ul style="list-style-type: none"> — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopee" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. <p>2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: "For professional users only".</p> <p>3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.</p> <p>4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.</p>

National legislation Belgium

AIRCLEAN

No data available

National legislation The Netherlands

AIRCLEAN

Waterbezuwaarlijkheid	B (1)
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National legislation France

AIRCLEAN

No data available

National legislation Germany

AIRCLEAN

WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4) and Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) of 18 April 2017
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propan-2-ol

TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	Propan-2-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden

carbon dioxide

TA-Luft	5.2.1
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glyoxal

TA-Luft	5.2.5; I
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didecyldimethylammonium chloride

TA-Luft	5.2.1
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National legislation United Kingdom

AIRCLEAN

No data available

Other relevant data

AIRCLEAN

No data available

propan-2-ol

IARC - classification	3; Isopropanol
TLV - Carcinogen	2-propanol; A4

glyoxal

Skin Sensitisation	Glyoxal; SEN; Sensitization
TLV - Carcinogen	Glyoxal; A4

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15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H229 Pressurised container: May burst if heated.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ERC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

M-factor

didecyldimethylammonium chloride	10	Acute	ECHA
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The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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