

**Good Sense Mandarin O1i**

Revision: 2014-10-08

Version: 06.0

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

**1.1 Product identifier**

**Trade name:** Good Sense Mandarin O1i

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

**Identified uses:**

AISE-C17 - Air fresheners aerosol

**Uses advised against:** Uses other than those identified are not recommended

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

Diversey Europe Operations BV, Maarssenbroeksedijk 2, 3542DN Utrecht, The Netherlands

**Contact details**

Diversey Ltd

Weston Favell Centre, Northampton NN3 8PD, United Kingdom

Tel: 01604 405311, Fax: 01604 406809

Regulatory Email: MSDSinfoUK@sealedair.com

**1.4 Emergency telephone number**

For medical or environmental emergency only:

call 0800 052 0185

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

The product has been classified and labelled in accordance with Regulation (EC) No 1272/2008.

Aerosol 1 (H222)

Aquatic Chronic 3 (H412)

**Classification in accordance with Directive 1999/45/EC and corresponding national legislation**

**Indication of danger**

F+ - Extremely flammable

**Risk phrases:**

R12 - Extremely flammable.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2 Label elements**



**Signal word:** Danger

Contains EUH208: d-limonene (Limonene), 5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1) (Methylchloroisothiazolinone, Methylisothiazolinone)

**Hazard statements:**

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

EUH208 - May produce an allergic reaction.

H412 - Harmful to aquatic life with long lasting effects.

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**Precautionary statements:**

P102 - Keep out of reach of children.

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

P211 - Do not spray on an open flame or other ignition source.

P251 - Do not pierce or burn, even after use.

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

P501 - Dispose of unused content as chemical waste.

**2.3 Other hazards**

No other hazards known. The product does not meet the criteria for PBT or vPvB in accordance with Regulation (EC) No 1907/2006, Annex XIII.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

Ingredient(s)	EC number	CAS number	REACH number	Classification	Classification (1999/45/EC)	Notes	Weight percent
butane	203-448-7	106-97-8	No data available	Flam. Gas 1 (H220) Liquified gas (H280)	F+;R12		3-10
d-limonene	227-813-5	5989-27-5	01-2119529223-47	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	R10 Xi;R38-43 N;R50/53 Xn;R65		0.1-1
trimethyloctadecylammonium chloride	203-929-1	112-03-8	No data available	Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Acute 1 (H400)	Xn;R22 C;R34 N;R50		0.01-0.1
ammonia	215-647-6	1336-21-6	01-2119488876-14	Skin Corr. 1B (H314) STOT SE 3 (H335) Aquatic Acute 1 (H400)	C;R34 N;R50		0.01-0.1
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	220-239-6 247-500-7	55965-84-9	No data available	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	T;R23/24/25 C;R34 Xi;R43 N;R50/53		< 0.01

\* Polymer.

For the full text of the R, H and EUH phrases mentioned in this Section, see Section 16.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

[1] Exempted: ionic mixture. See Regulation (EC) No 1907/2006, Annex V, paragraph 3 and 4. This salt is potentially present, based on calculation, and included for classification and labelling purposes only. Each starting material of the ionic mixture is registered, as required.

[2] Exempted: included in Annex IV of Regulation (EC) No 1907/2006.

[3] Exempted: Annex V of Regulation (EC) No 1907/2006.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

**SECTION 4: First aid measures****4.1 Description of first aid measures****Inhalation**

Get medical attention or advice if you feel unwell.

**Skin contact:**

Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.

**Eye contact:**

Rinse cautiously with water for several minutes. If irritation occurs and persists, get medical attention.

**Ingestion:**

Rinse mouth. Immediately drink 1 glass of water. Get medical attention or advice if you feel unwell.

**Self-protection of first aider:**

Consider personal protective equipment as indicated in subsection 8.2.

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

No known effects or symptoms in normal use.

**Skin contact:**

Direct contact can damage skin by freezing.

**Eye contact:**

Direct contact can damage the eye by freezing.

**Ingestion:**

No known effects or symptoms in normal use.

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

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

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

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

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

Cool endangered packaging with water spray jet.

**5.3 Advice for firefighters**

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

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

No special measures required.

**6.2 Environmental precautions**

No special environmental precautions required. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

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

Absorb with liquid-binding material (sand, diatomite, universal binders, sawdust). Absorb liquid components with liquid-binding material.

**6.4 Reference to other sections**

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

Keep away from heat. BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50° C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.

**Measures required to protect the environment:**

For environmental exposure controls see subsection 8.2.

**Advices on general occupational hygiene:**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Handle and open container with care. Do not mix with other products unless advised by Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Use personal protective equipment as required. Use only with adequate ventilation.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local and national regulations. Keep only in original container. Store in a closed container.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

**7.3 Specific end use(s)**

No specific advice for end use available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
butane	600 ppm 1450 mg/m <sup>3</sup>	750 ppm 1810 mg/m <sup>3</sup>

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

**DNEL/DMEL and PNEC values****Human exposure**

DNEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
butane	No data available	No data available	No data available	No data available
d-limonene	No data available	No data available	No data available	4.76
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	No data available	No data available	No data available	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

DNEL dermal exposure - Worker

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Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
butane	No data available	No data available	No data available	No data available
d-limonene	0.222 mg/cm <sup>2</sup> skin	No data available	No data available	No data available
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	No data available	6.8	No data available	6.8
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

## DNEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
butane	No data available	No data available	No data available	No data available
d-limonene	0.111 mg/cm <sup>2</sup> skin	No data available	No data available	No data available
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	No data available	No data available	No data available	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

DNEL inhalatory exposure - Worker (mg/m<sup>3</sup>)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
butane	No data available	No data available	No data available	No data available
d-limonene	No data available	No data available	No data available	33.3
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	36	47.6	14	47.6
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

DNEL inhalatory exposure - Consumer (mg/m<sup>3</sup>)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
butane	No data available	No data available	No data available	No data available
d-limonene	No data available	No data available	No data available	8.33
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	No data available	No data available	No data available	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

## Environmental exposure

## Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
butane	No data available	No data available	No data available	No data available
d-limonene	0.0054	0.00054	No data available	1.8
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	0.0011	0.011	No data available	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

## Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m <sup>3</sup> )
butane	No data available	No data available	No data available	No data available
d-limonene	1.32	0.13	0.262	No data available
trimethyloctadecylammonium chloride	No data available	No data available	No data available	No data available
ammonia	No data available	No data available	No data available	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available	No data available	No data available	No data available

## 8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2.  
If available, please refer to the product information sheet for application and handling instructions.  
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

**Appropriate engineering controls:** No special requirements under normal use conditions.  
**Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

## Personal protective equipment

**Eye / face protection:** Safety glasses are not normally required. However, their use is recommended in those cases where splashes may occur when handling the product.

**Hand protection:** No special requirements under normal use conditions.

**Body protection:** No special requirements under normal use conditions.

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**Respiratory protection:** Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.

**Environmental exposure controls:** No special requirements under normal use conditions.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Information in this section refers to the product, unless it is specifically stated that substance data is listed

#### Method / remark

**Physical State:** Liquid Aerosol

**Colour:** Colourless

**Odour:** Perfumed

**Odour threshold:** Not applicable

**pH:**

**Melting point/freezing point (°C):** Not determined

**Initial boiling point and boiling range (°C):** Not applicable as product is an aerosol

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
butane	No data available		
d-limonene	175-178	Method not given	1013
trimethyloctadecylammonium chloride	No data available		
ammonia	28.5	Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available		

#### Method / remark

**Flash point (°C):** Not applicable as product is an aerosol

**Sustained combustion:** Not determined

**Evaporation rate:** Not determined

**Flammability (solid, gas):** Not determined

**Upper/lower flammability limit (%):** Not determined

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit (% vol)	Upper limit (% vol)
d-limonene	0.7	6.1
ammonia	15.4	33.6

#### Method / remark

**Vapour pressure:** Not determined

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
butane	No data available		
d-limonene	190-230	Method not given	20
trimethyloctadecylammonium chloride	No data available		
ammonia	586500	Method not given	20
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available		

#### Method / remark

**Vapour density:** Not determined

**Relative density:** Not determined

**Solubility in / Miscibility with Water:** Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
butane	No data available		
d-limonene	Insoluble	Method not given	20
trimethyloctadecylammonium chloride	No data available		
ammonia	100 Soluble	Method not given	20
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

#### Method / remark

**Autoignition temperature:** Not determined

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**Decomposition temperature:** Not determined

**Viscosity:** Not determined

**Explosive properties:** Not explosive. Vapours may form explosive mixtures with air.

**Oxidising properties:** Not oxidising

## 9.2 Other information

**Surface tension (N/m):** Not determined

**Corrosion to metals:** Not corrosive

Substance data, dissociation constant, if available:

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal storage and use conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

### 10.4 Conditions to avoid

Protect from sunlight. Keep away from heat and direct sunlight.

### 10.5 Incompatible materials

None known under normal use conditions.

### 10.6 Hazardous decomposition products

None known under normal storage and use conditions.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

No data is available on the mixture

Substance data, where relevant and available, are listed below.

#### Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
butane		No data available			
d-limonene	LD <sub>50</sub>	4400 - 5100	Rat	Method not given	
trimethyloctadecylammonium chloride		No data available			
ammonia	LD <sub>50</sub>	350	Rat	Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	LD <sub>50</sub>	457	Rat	Method not given	

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
butane		No data available			
d-limonene	LD <sub>50</sub>	> 5000	Rabbit	Method not given	
trimethyloctadecylammonium chloride		No data available			
ammonia		No data available			
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	LD <sub>50</sub>	660	Rabbit	Method not given	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
butane		No data available			
d-limonene		No data available			

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trimethyloctadecylammonium chloride		No data available			
ammonia	LC <sub>50</sub>	7.035	Rat	Method not given	0.5
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available			

**Irritation and corrosivity**

## Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
butane	No data available			
d-limonene	Irritant	Rabbit	Method not given	
trimethyloctadecylammonium chloride	No data available			
ammonia	Corrosive		Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	Corrosive		Method not given	

## Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
butane	No data available			
d-limonene	No data available			
trimethyloctadecylammonium chloride	No data available			
ammonia	Severe damage		Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	Severe damage		Method not given	

## Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
butane	No data available			
d-limonene	No data available			
trimethyloctadecylammonium chloride	No data available			
ammonia	Irritating to respiratory tract		Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available			

**Sensitisation**

## Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
butane	No data available			
d-limonene	Sensitising	Guinea pig	Method not given	
trimethyloctadecylammonium chloride	No data available			
ammonia	Not sensitising		Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	Sensitising		Method not given	

## Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
butane	No data available			
d-limonene	No data available			
trimethyloctadecylammonium chloride	No data available			
ammonia	No data available			
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available			

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

## Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
butane	No data available		No data available	
d-limonene	No data available		No data available	
trimethyloctadecylammonium chloride	No data available		No data available	
ammonia	No evidence for mutagenicity		No evidence for mutagenicity	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No evidence for mutagenicity	Method not given	No data available	

## Carcinogenicity

Ingredient(s)	Effect
butane	No data available
d-limonene	No data available
trimethyloctadecylammonium chloride	No data available

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ammonia	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No evidence for carcinogenicity, negative test results

## Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
butane			No data available				
d-limonene			No data available				
trimethyloctadecylammonium chloride			No data available				
ammonia			No data available				No evidence for reproductive toxicity
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)			No data available				No evidence for reproductive toxicity No evidence for teratogenic effects

## Repeated dose toxicity

## Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
butane		No data available				
d-limonene		No data available				
trimethyloctadecylammonium chloride		No data available				
ammonia	NOAEL	68		Method not given		
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available				

## Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
butane		No data available				
d-limonene		No data available				
trimethyloctadecylammonium chloride		No data available				
ammonia		No data available				
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available				

## Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
butane		No data available				
d-limonene		No data available				
trimethyloctadecylammonium chloride		No data available				
ammonia		No data available				
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available				

## Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
butane			No data available					
d-limonene			No data available					
trimethyloctadecylammonium chloride			No data available					
ammonia			No data available					



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5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)			No data available				
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## STOT-single exposure

Ingredient(s)	Affected organ(s)
butane	No data available
d-limonene	No data available
trimethyloctadecylammonium chloride	No data available
ammonia	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available

## STOT-repeated exposure

Ingredient(s)	Affected organ(s)
butane	No data available
d-limonene	No data available
trimethyloctadecylammonium chloride	No data available
ammonia	No data available
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available

## Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

## Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

## SECTION 12: Ecological information

## 12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below

## Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
butane		No data available			
d-limonene	LC <sub>50</sub>	0.72	<i>Pimephales promelas</i>	OECD 203	96
trimethyloctadecylammonium chloride		No data available			
ammonia	LC <sub>50</sub>	0.56 - 2.48	<i>Fish</i>	Method not given	96
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	LC <sub>50</sub>	0.28	<i>Lepomis macrochirus</i>	OECD 203	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
butane		No data available			
d-limonene	EC <sub>50</sub>	0.36	<i>Daphnia magna Straus</i>	OECD 202	48
trimethyloctadecylammonium chloride		No data available			
ammonia	EC <sub>50</sub>	1.1 - 22.8	<i>Daphnia magna Straus</i>	Method not given	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	EC <sub>50</sub>	0.126	<i>Daphnia magna Straus</i>	OECD 202	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
butane		No data available			
d-limonene	E <sub>r</sub> C <sub>50</sub>	150	<i>Desmodesmus subspicatus</i>	OECD 201	72
trimethyloctadecylammonium chloride		No data available			

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ammonia		No data available			
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	EC <sub>50</sub>	0.003	<i>Pseudokirchneriella subcapitata</i>	OECD 201	72

## Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
butane		No data available			
d-limonene		No data available			
trimethyloctadecylammonium chloride		No data available			
ammonia		No data available			
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available			

## Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
butane		No data available			
d-limonene		No data available			
trimethyloctadecylammonium chloride		No data available			
ammonia		No data available			
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	EC <sub>20</sub>	0.97	<i>Activated sludge</i>	OECD 209	3 hour(s)

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
butane		No data available				
d-limonene		No data available				
trimethyloctadecylammonium chloride		No data available				
ammonia		No data available				
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available				

## Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
butane		No data available				
d-limonene		No data available				
trimethyloctadecylammonium chloride		No data available				
ammonia		No data available				
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available				

## Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
butane		No data available				
d-limonene		No data available				
trimethyloctadecylammonium chloride		No data available				
ammonia		No data available				
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		No data available				

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**Terrestrial toxicity**

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

**12.2 Persistence and degradability****Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

**Biodegradation**

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
butane					No data available
d-limonene			80 % in 28 day(s)	OECD 301D	Readily biodegradable
trimethyloctadecylammonium chloride					No data available
ammonia					Readily biodegradable
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)		Oxygen depletion	> 60%	OECD 301D	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

**12.3 Bioaccumulative potential**

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
butane	No data available			
d-limonene	No data available		High potential for bioaccumulation	
trimethyloctadecylammonium chloride	No data available			
ammonia	0.23	Method not given	No bioaccumulation expected	
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	-0.71 - +0.75	Method not given	No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
butane	No data available				
d-limonene	683.1		Method not given	High potential for bioaccumulation	
trimethyloctadecylammonium chloride	No data available				
ammonia	No data available				
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available				

**12.4 Mobility in soil**

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log K <sub>oc</sub>	Desorption coefficient Log K <sub>oc</sub> (des)	Method	Soil/sediment type	Evaluation
butane	No data available				
d-limonene	No data available				High potential for mobility in soil
trimethyloctadecylammonium chloride	No data available				
ammonia	No data available				Low mobility in soil
5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1)	No data available				

**12.5 Results of PBT and vPvB assessment**

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Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

**12.6 Other adverse effects**

No other adverse effects known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**European Waste Catalogue:**

16 05 04\* - gases in pressure containers (including halons) containing dangerous substances.

**Empty packaging****Recommendation:**

Dispose of observing national or local regulations.

**Suitable cleaning agents:**

Water, if necessary with cleaning agent.

**SECTION 14: Transport information****ADR, RID, ADN, IMO/IMDG, ICAO/IATA**

**14.1 UN number:** 1950

**14.2 UN proper shipping name:**

Aerosols

**14.3 Transport hazard class(es):**

Class: 2

Label(s): 2.1

**14.4 Packing group:** -

**14.5 Environmental hazards:**

Environmentally hazardous: No

Marine pollutant: No

**14.6 Special precautions for user:** None known.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** The product is not transported in bulk tankers.

**Other relevant information:****ADR**

Classification code: 5F

Tunnel restriction code: D

Hazard identification number: -

**IMO/IMDG**

EmS: F-D, S-U

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

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

**Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII):** Not applicable.

**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out on the mixture

**SECTION 16: Other information**

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**MSDS code:** MSDS5542

**Version:** 06.0

**Revision:** 2014-10-08

**Reason for revision:**

Overall design adjusted in accordance with Amendment 453/2010, Annex II of Regulation (EC) No 1907/2006, This data sheet contains changes from the previous version in section(s):, 3, 8

**Good Sense Mandarin O1i****Classification procedure**

The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

**Full text of the R, H and EUH phrases mentioned in section 3:**

- H220 - Extremely flammable gas.
- H226 - Flammable liquid and vapour.
- H280 - Contains gas under pressure; may explode if heated.
- H301 - Toxic if swallowed.
- H302 - Harmful if swallowed.
- H304 - May be fatal if swallowed and enters airways.
- H311 - Toxic in contact with skin.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H331 - Toxic if inhaled.
- H335 - May cause respiratory irritation.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- R10 - Flammable.
- R12 - Extremely flammable.
- R22 - Harmful if swallowed.
- R23 - Toxic by inhalation.
- R24 - Toxic in contact with skin.
- R25 - Toxic if swallowed.
- R34 - Causes burns.
- R38 - Irritating to skin.
- R43 - May cause sensitisation by skin contact.
- R50 - Very toxic to aquatic organisms.
- R65 - Harmful: may cause lung damage if swallowed.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Abbreviations and acronyms:**

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit
- EUH - CLP Specific hazard statement
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- ATE - Acute Toxicity Estimate

**End of Safety Data Sheet**