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

### 1.1 Product identifier

| | | |
|---|---|---|
| Trade name | : | mikrozid® sensitive liquid |
| Unique Formula Identifier (UFI) | : | 9CJ1-40E3-500F-8RWE |

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

| | | |
|---|---|---|
| Use of the Substance/Mixture | : | Disinfectants |
| Recommended restrictions on use | : | For professional users only. |

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

| | | |
|---|---|---|
| Producer | : | Schülke & Mayr GmbH<br>Robert-Koch-Str. 2<br><br>22851 Norderstedt<br>Germany<br>Telephone: +49 (0)40/ 52100-0<br>Telefax: +49 (0)40/ 52100318<br>mail@schuelke.com<br>www.schuelke.com |
| Supplier | : | Schülke & Mayr UK Ltd.<br>Cygnet House<br>1, Jenkin Road<br><br>Sheffield S9 1AT<br>United Kingdom<br>Telephone: +44 114 254 35 00<br>Telefax: +44 114 254 35 01<br>mail.uk@schulke.com |
| E-mail address of person responsible for the SDS/Contact person | : | Application Specialists<br>+49 (0)40/ 521 00 666<br>AD@schuelke.com |

### 1.4 Emergency telephone number

| | | |
|---|---|---|
| Emergency telephone number | : | Carechem 24 International:+44 1235 239670 |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

| | |
|---|---|
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)**

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**

P273 Avoid release to the environment.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Aqueous solution

**Hazardous components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides | 85409-23-0<br>287-090-7<br>- - -<br>01-2120771812-51-XXXX | Acute Tox. 4; H302<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>_____<br>M-Factor (Acute aquatic toxicity): 10<br>M-Factor (Chronic | >= 0.1 - < 0.25 |

| | | | |
|---|---|---|---|
| | | aquatic toxicity): 1 | |
| didecyldimethylammonium chloride | 7173-51-5<br>230-525-2<br>612-131-00-6<br>01-2119945987-15-XXXX | Acute Tox. 3; H301<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Aquatic Acute 1; H400<br>Aquatic Chronic 2; H411<br>———————<br>M-Factor (Acute aquatic toxicity): 10<br>M-Factor (Chronic aquatic toxicity): 1 | >= 0.1 - < 0.25 |
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | 68424-85-1<br>270-325-2<br>- - -<br>01-2119965180-41-XXXX | Acute Tox. 4; H302<br>Acute Tox. 4; H312<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>———————<br>M-Factor (Acute aquatic toxicity): 10<br>M-Factor (Chronic aquatic toxicity): 1 | >= 0.1 - < 0.25 |

For explanation of abbreviations see section 16.

**Other information**

CAS 68424-85-1 CORRESPONDS TO
REACH: EC 939-253-5
BPR: EC 269-919-4/ CAS 68391-01-5

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Take off contaminated clothing and shoes immediately.

If inhaled : If symptoms persist, call a physician.

In case of skin contact : Wash with water and soap as a precaution.
If symptoms persist, call a physician.

In case of eye contact : Flush eyes with water as a precaution.
If eye irritation persists, consult a specialist.

If swallowed : Do NOT induce vomiting.
Drink water as a precaution.

Consult a physician if necessary.

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

Symptoms : Treat symptomatically.

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

Treatment : For specialist advice physicians should contact the Poisons Information Service.

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**

Suitable extinguishing media : Dry powder
Carbon dioxide (CO2)
Water spray jet
Foam

Unsuitable extinguishing media : Do NOT use water jet.

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

Hazardous combustion products : No hazardous combustion products are known

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.

**6.2 Environmental precautions**

Environmental precautions : Avoid subsoil penetration.

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

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**6.4 Reference to other sections**

see Section 8 + 13

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : No special precautions required.
Advice on protection against fire and explosion : No special protective measures against fire required.

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

Requirements for storage areas and containers : Store at room temperature in the original container.

Further information on storage conditions : Keep container tightly closed. Protect from frost, heat and sunlight. Recommended storage temperature: 15 - 25°C

Advice on common storage : Keep away from food and drink.

### 7.3 Specific end use(s)

Specific use(s) : none

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

**Derived No Effect Level (DNEL):**

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides | Workers | Inhalation | Long-term systemic effects | 1 mg/m3 |
| didecyldimethylammonium chloride | Workers | Inhalation | Acute systemic effects, Long-term systemic effects | 5.39 mg/m3 |
| | Workers | Dermal | Acute systemic effects, Long-term systemic effects | 1.55 mg/kg |
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | Workers | Skin contact | Long-term systemic effects | 5.7 mg/kg |
| | Workers | Inhalation | Long-term systemic effects | 3.96 mg/m3 |

**Predicted No Effect Concentration (PNEC):**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Quaternary ammonium com- | Fresh water | 0.000415 mg/l |

| | | |
|---|---|---|
| pounds, C12-14-al-kyl[(ethylphenyl)methyl]dimethyl, chlorides | | |
| | Marine water | 0.000042 mg/l |
| | Sewage treatment plant | 0.21 mg/l |
| | Fresh water sediment | 6.81 mg/kg |
| | Marine sediment | 0.681 mg/kg |
| | Soil | 1.36 mg/kg |
| didecyldimethylammonium chloride | Fresh water | 0.002 mg/l |
| | Marine water | 0.0002 mg/l |
| | Fresh water sediment | 2.82 mg/kg |
| | Marine sediment | 0.28 mg/kg |
| | Sewage treatment plant | 0.595 mg/l |
| | Soil | 1.4 mg/kg |
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | Fresh water | 0.0009 mg/l |
| | Marine water | 0.00009 mg/l |
| | Fresh water sediment | 12.27 mg/kg |
| | Marine sediment | 13.09 mg/kg |
| | Soil | 7 mg/kg |
| | Effects on waste water treatment plants | 0.4 mg/l |
| | Intermittent use/release | 0.00016 mg/l |

### 8.2 Exposure controls

**Personal protective equipment**

Eye/face protection : Safety glasses with side-shields conforming to EN166

Hand protection

Directive : The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Remarks : Prolonged contact: Nitrile rubber gloves e.g. Camatril (>480 Min., layer thickness: 0,40 mm) or butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves from other manufacturers offering the same protection.

Respiratory protection : No personal respiratory protective equipment normally required.

Protective measures : Avoid contact with eyes.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : colourless

Odour : characteristic

Odour Threshold : not determined

pH : 5 - 8 (20 °C)

| | | |
|---|---|---|
| | | Concentration: 100 % |
| Melting point/freezing point | : | ca. 0 °C |
| Decomposition temperature | | Not applicable |
| Boiling point/boiling range | : | ca. 100 °C |
| Flash point | : | Not applicable |
| Evaporation rate | : | not determined |
| Flammability (solid, gas) | : | Not applicable |
| Upper explosion limit / Upper flammability limit | : | Not applicable |
| Lower explosion limit / Lower flammability limit | : | Not applicable |
| Vapour pressure | : | No data available |
| Relative vapour density | : | Not applicable |
| Density | : | ca. 1.00 g/cm3 (20 °C) |
| Solubility(ies) | | |
| Water solubility | : | completely soluble (20 °C) |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Auto-ignition temperature | : | Not applicable |
| Viscosity | | |
| Viscosity, dynamic | : | not determined |
| Viscosity, kinematic | : | not determined |
| Explosive properties | : | Not applicable |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |

**9.2 Other information**

| | | |
|---|---|---|
| Metal corrosion rate | : | None reasonably foreseeable. |

## SECTION 10: Stability and reactivity

**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability**

The product is chemically stable.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : None reasonably foreseeable.

### 10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

### 10.5 Incompatible materials

Materials to avoid : Never mix concentrates directly.

### 10.6 Hazardous decomposition products

None reasonably foreseeable.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

Acute oral toxicity : LD50 (Rat): 344 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit): 2,300 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

**didecyldimethylammonium chloride:**

Acute oral toxicity : LD50 (Rat): 238 mg/kg
Method: OECD Test Guideline 401
Assessment: Toxic if swallowed.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit): 3,342 mg/kg

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: Harmful if swallowed.

| | | |
|---|---|---|
| Acute inhalation toxicity | : | LC50 (Rat): > 2 mg/l<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | : | LD50 (Rat): 1,100 mg/kg<br>Assessment: Harmful in contact with skin. |

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | Corrosive after 3 minutes to 1 hour of exposure |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Exposure time | : | 4 h |
| Method | : | OECD Test Guideline 404 |
| Result | : | Corrosive after 3 minutes to 1 hour of exposure |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Species | : | Rabbit |
| Result | : | Corrosive after 3 minutes to 1 hour of exposure |
| GLP | : | no |

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:**

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Result | : | Irreversible effects on the eye |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Result | : | Irreversible effects on the eye |

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | Did not cause sensitisation on laboratory animals. |

| | | |
|---|---|---|
| GLP | : | yes |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | Did not cause sensitisation on laboratory animals. |
| GLP | : | yes |

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Result: negative<br>GLP: yes<br><br>Test Type: Chromosome aberration test in vitro<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 473<br>Result: negative<br>GLP: yes<br>Remarks: Based on data from similar materials |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test system: Salmonella typhimurium<br>Metabolic activation: Metabolic activation<br>Method: OECD Test Guideline 471<br>Result: Not mutagenic in Ames Test |
| Genotoxicity in vivo | : | Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Rat<br>Application Route: Oral<br>Method: OECD Test Guideline 475<br>Result: negative |
| Germ cell mutagenicity- Assessment | : | Animal testing did not show any mutagenic effects. |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Microbial mutagenesis assay (Ames test)<br>Test system: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Method: OECD Test Guideline 471<br>Result: Not mutagenic in Ames Test |

| | | |
|---|---|---|
| Genotoxicity in vivo | : | Test Type: In vivo micronucleus test<br>Species: Mouse (male and female)<br>Application Route: Oral<br>Method: OECD Test Guideline 474<br>GLP: yes |
| Germ cell mutagenicity- Assessment | : | Tests on bacterial or mammalian cell cultures did not show mutagenic effects. |

**Carcinogenicity**

Not classified based on available information.

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Remarks | : | No data available |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Animal testing did not show any carcinogenic effects. |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Carcinogenicity - Assessment | : | Animal testing did not show any carcinogenic effects. |

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation study<br>Species: Rat, male and female<br>Application Route: Oral<br>General Toxicity - Parent: NOAEL: 51 - 102 mg/kg body weight<br>General Toxicity F1: NOAEL: 51 - 102 mg/kg body weight<br>GLP: yes |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Reproductive toxicity - Assessment | : | No data available |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation study<br>Species: Rat, male and female<br>Application Route: Oral<br>General Toxicity - Parent: NOAEL: 51 - 102 mg/kg body weight<br>General Toxicity F1: NOAEL: 41 - 83 mg/kg body weight<br>Fertility: NOAEL: 139 - 198 mg/kg body weight<br>Method: OECD Test Guideline 416<br>Result: Animal testing did not show any effects on fertility.<br>GLP: yes |

| | | |
|---|---|---|
| Effects on foetal development | : | Species: Rat<br>Application Route: Oral<br>General Toxicity Maternal: NOAEL: 8.1 mg/kg body weight<br>Developmental Toxicity: NOAEL: 81 mg/kg body weight<br>Method: OECD Test Guideline 414<br>GLP: yes<br>Remarks: Animal testing did not show any effects on foetal development. |

**STOT - single exposure**

Not classified based on available information.

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

Remarks : No data available

**didecyldimethylammonium chloride:**

Remarks : No data available

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Remarks : No data available

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

Remarks : No data available

**didecyldimethylammonium chloride:**

Remarks : No data available

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

Remarks : No data available

**Repeated dose toxicity**

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

Remarks : No data available

**didecyldimethylammonium chloride:**

Remarks : No data available

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Species | : | Rat, male |
| NOAEL | : | 31 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 90-day |
| Method | : | OECD Test Guideline 408 |
| GLP | : | yes |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 214 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 14-days |
| Method | : | OECD Test Guideline 407 |

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Product:**

| | | |
|---|---|---|
| Remarks | : | No data is available on the product itself. |

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Fish): 1.06 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0.015 mg/l<br>Exposure time: 48 h |
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0.032 mg/l<br>Exposure time: 28 d<br>Species: Oncorhynchus mykiss (rainbow trout) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0.00415 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>GLP: yes |
| M-Factor (Chronic aquatic toxicity) | : | 1 |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Pimephales promelas (fathead minnow)): 0.19 mg/l<br>Exposure time: 96 h<br>GLP: yes |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0.062 mg/l<br>Exposure time: 48 h<br>GLP: yes |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.026 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 201<br>GLP: yes |
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0.032 mg/l<br>Exposure time: 34 d<br>Species: Danio rerio (zebra fish)<br>Method: OECD Test Guideline 210 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0.014 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: Expert judgement and weight of evidence determination. |
| M-Factor (Chronic aquatic toxicity) | : | 1 |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 0.85 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna): 0.015 mg/l<br>Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | IC50 : 0.03 mg/l<br>Exposure time: 72 h |
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: 0.032 mg/l<br>Exposure time: 34 d<br>Species: Pimephales promelas (fathead minnow) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 0.0042 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea) |
| M-Factor (Chronic aquatic toxicity) | : | 1 |

### 12.2 Persistence and degradability

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 95.5 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301B<br>Remarks: Based on data from similar materials |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Biodegradability | : | Concentration: 10 mg/l<br>Result: Readily biodegradable.<br>Biodegradation: 72 %<br>Exposure time: 28 d<br>Method: OECD 301B/ ISO 9439/ EEC 84/449 C5<br>GLP: yes |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Biodegradability | : | Concentration: 5 mg/l<br>Result: Readily biodegradable.<br>Biodegradation: 95.5 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301B |

### 12.3 Bioaccumulative potential

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Bioaccumulation | : | Remarks: Bioaccumulation is unlikely. |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Bioaccumulation | : | Species: Lepomis macrochirus (Bluegill sunfish)<br>Exposure time: 46 d<br>Bioconcentration factor (BCF): 81 |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Bioaccumulation | : | Exposure time: 35 d<br>Concentration: 0.076 mg/l<br>Bioconcentration factor (BCF): 79<br>GLP: yes<br>Remarks: Does not bioaccumulate. |
| Partition coefficient: n-octanol/water | : | log Pow: 2.75 (20 °C) |

### 12.4 Mobility in soil

**Components:**

**Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides:**

| | | |
|---|---|---|
| Mobility | : | Medium: Soil<br>Remarks: immobile |

**didecyldimethylammonium chloride:**

| | | |
|---|---|---|
| Mobility | : | Remarks: Mobile in soils |

**Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:**

| | | |
|---|---|---|
| Mobility | : | Remarks: No data available |

### 12.5 Results of PBT and vPvB assessment

**Product:**

| | | |
|---|---|---|
| Assessment | : | This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. |

### 12.6 Other adverse effects

**Product:**

| | | |
|---|---|---|
| Endocrine disrupting potential | : | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| Additional ecological information | : | No data is available on the product itself. |

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | | |
|---|---|---|
| Product | : | Disposal together with normal waste is not allowed. Special disposal required according to local regulations. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal. |

## SECTION 14: Transport information

### 14.1 UN number

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |

| | | |
|---|---|---|
| **IATA** | : | Not regulated as a dangerous good |

**14.2 UN proper shipping name**

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA** | : | Not regulated as a dangerous good |

**14.3 Transport hazard class(es)**

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA** | : | Not regulated as a dangerous good |

**14.4 Packing group**

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA (Cargo)** | : | Not regulated as a dangerous good |
| **IATA (Passenger)** | : | Not regulated as a dangerous good |

**14.5 Environmental hazards**

Not regulated as a dangerous good

**14.6 Special precautions for user**

Not applicable

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

Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

| | | |
|---|---|---|
| UK REACH List of restrictions (Annex 17) | : | Conditions of restriction for the following entries should be considered: Number on list 3 |
| UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation | : | Not applicable |
| The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain) | : | Not applicable |
| International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| UK REACH List of substances subject to authorisation (Annex XIV) | : | Not applicable |
| Volatile organic compounds | : | Directive 2010/75/EU of 24 November 2010 on industrial |

emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 0.11 %

according to Detergents Regulation EC 648/2004 : < 5%: Cationic surfactants

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | Product contains substance(s) not listed on TSCA inventory. |
| AIIC | : | Not in compliance with the inventory |
| DSL | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br><br>Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |
| IECSC | : | On the inventory, or in compliance with the inventory |
| NZIoC | : | Not in compliance with the inventory |
| TECI | : | On the inventory, or in compliance with the inventory |

### 15.2 Chemical safety assessment

Exempt

SECTION 16: Other information**Full text of H-Statements**

| | | |
|---|---|---|
| H301 | : | Toxic if swallowed. |
| H302 | : | Harmful if swallowed. |
| H312 | : | Harmful in contact with skin. |
| H314 | : | Causes severe skin burns and eye damage. |
| H318 | : | Causes serious eye damage. |
| 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. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Acute | : | Short-term (acute) aquatic hazard |
| Aquatic Chronic | : | Long-term (chronic) aquatic hazard |
| Eye Dam. | : | Serious eye damage |
| Skin Corr. | : | Skin corrosion |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Test-

ing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Aquatic Chronic 3 | H412 | Calculation method |

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.