

# SAFETY DATA SHEET

according to the Globally Harmonized System

# schülke

## **mikrozyd® sensitive wipes**

Version  
05.00

Revision Date:  
11.06.2020

Date of last issue: -  
Date of first issue: 11.06.2020

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : mikrozyd® sensitive wipes

#### **Manufacturer or supplier's details**

Producer : Schülke & Mayr GmbH  
Robert-Koch-Str. 2  
  
22851 Norderstedt  
Germany  
Telephone: +49 (0)40/ 52100-0  
Telefax: +49 (0)40/ 52100318  
mail@schuelke.com  
www.schuelke.com



Importer : Schülke & Mayr (Asia) Pte. Ltd.  
10 Jalan Kilang  
#04-01/02/03 Sime Darby Enterprise Centre

159410 Singapore  
Singapore  
Telephone: +65 6257 2388  
Telefax: +65 6257 9388  
mail.sg@schuelke.com

Emergency telephone number : +65 6257 2388

#### **Recommended use of the chemical and restrictions on use**

Recommended use : Disinfectants

Restrictions on use : Restricted to professional users.

### 2. HAZARDS IDENTIFICATION

#### **GHS Classification**

Long-term (chronic) aquatic hazard : Category 3

#### **GHS label elements**

Hazard pictograms : None

Signal word : None

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

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.

**Disposal:**

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

### **Other hazards which do not result in classification**

No special risks known.

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture  
Chemical nature : Aqueous containing solution on non-woven

#### **Components**

Chemical name	CAS-No.	Concentration (% w/w)
Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14))	85409-23-0	>= 0.1 -< 0.25
Didecyldimethylammonium chloride	7173-51-5	>= 0.1 -< 0.25
Alkyl (C12-16) dimethylbenzyl ammonium chloride	68424-85-1	>= 0.1 -< 0.25

### **4. 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.

Most important symptoms and effects, both acute and delayed : Treat symptomatically.

Notes to physician : For specialist advice physicians should contact the Poisons Information Service.

### **5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Dry powder  
Carbon dioxide (CO<sub>2</sub>)  
Water spray jet  
Foam

Unsuitable extinguishing : Do NOT use water jet.

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Specific hazards during fire-fighting : none

Hazardous combustion products : No hazardous combustion products are known

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

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Environmental precautions : No special environmental precautions required.

Methods and materials for containment and cleaning up : Use mechanical handling equipment.

### 7. HANDLING AND STORAGE

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

Advice on safe handling : No special precautions required.

Conditions for safe storage : Store at room temperature in the original container.

Further information on storage conditions : Keep container tightly closed.  
Keep away from heat.  
Keep away from direct sunlight.  
Recommended storage temperature: 15 - 25°C

Materials to avoid : Keep away from food and drink.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

#### **Personal protective equipment**

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

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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.

Protective measures : Avoid contact with eyes.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aqueous containing solution on non-woven

Colour : colourless

Odour : characteristic

Odour Threshold : not determined

pH : 6 - 8 (20 °C)  
of the active solution

Melting point/freezing point : ca. 0 °C  
of the active solution

Decomposition temperature : Not applicable

Boiling point/boiling range : ca. 100 °C  
of the active solution

Flash point : Not applicable

Evaporation rate : not determined

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/cm<sup>3</sup> (20 °C)  
of the active solution

Solubility(ies)  
Water solubility : in all proportions (20 °C)

Partition coefficient: n-octanol/water : Not applicable

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Auto-ignition temperature	:	Not applicable
Viscosity	:	
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

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### 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	None reasonably foreseeable.
Conditions to avoid	:	Protect from frost, heat and sunlight.
Incompatible materials	:	None reasonably foreseeable.
Hazardous decomposition products	:	None reasonably foreseeable.

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### 11. TOXICOLOGICAL INFORMATION

#### **Acute toxicity**

##### **Product:**

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

##### **Components:**

#### **Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)):**

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

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

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**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  
Test atmosphere: dust/mistAcute dermal toxicity : LD50 (Rat): 1,100 mg/kg  
Assessment: Harmful in contact with skin.**Skin corrosion/irritation****Components:****Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)):**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**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**Species : Rabbit  
Result : Corrosive after 3 minutes to 1 hour of exposure  
GLP : no**Serious eye damage/eye irritation****Components:****Didecyldimethylammonium chloride:**

Result : Irreversible effects on the eye

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Result : Irreversible effects on the eye

**Respiratory or skin sensitisation****Components:****Didecyldimethylammonium chloride:**Test Type : Buehler Test  
Species : Guinea pig

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Method : OECD Test Guideline 406  
Result : Did not cause sensitisation on laboratory animals.  
GLP : yes

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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****Components:****Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)):**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: yes

Test Type: Chromosome aberration test in vitro  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative  
GLP: yes  
Remarks: Based on data from similar materials

**Didecyldimethylammonium chloride:**

Genotoxicity in vitro : Test system: Salmonella typhimurium  
Metabolic activation: Metabolic activation  
Method: OECD Test Guideline 471  
Result: Not mutagenic in Ames Test

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow  
cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Oral  
Method: OECD Test Guideline 475  
Result: negative

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

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Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male and female)  
Application Route: Oral  
Method: OECD Test Guideline 474  
GLP: yes

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

**Carcinogenicity****Components:****Didecyldimethylammonium chloride:**

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

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

**Reproductive toxicity****Components:****Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)):**

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

**Didecyldimethylammonium chloride:**

Reproductive toxicity - Assessment : No data available

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

Effects on foetal development : Species: Rat  
Application Route: Oral



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General Toxicity Maternal: NOAEL: 8.1 mg/kg body weight  
Developmental Toxicity: NOAEL: 81 mg/kg body weight  
Method: OECD Test Guideline 414  
GLP: yes  
Remarks: Animal testing did not show any effects on foetal development.

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

**STOT - single exposure****Components:****Didecyldimethylammonium chloride:**

Remarks : No data available

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Remarks : No data available

**STOT - repeated exposure****Components:****Didecyldimethylammonium chloride:**

Remarks : No data available

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Remarks : No data available

**Repeated dose toxicity****Components:****Didecyldimethylammonium chloride:**

Remarks : No data available

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

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

**Further information****Product:**

Remarks : No data is available on the product itself.



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

**Didecyldimethylammonium chloride:**

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 0.19 mg/l Exposure time: 96 h GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.062 mg/l Exposure time: 48 h GLP: yes
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.026 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to fish (Chronic toxicity)	:	NOEC (Danio rerio (zebra fish)): 0.032 mg/l Exposure time: 34 d Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.014 mg/l Exposure time: 21 d Method: Expert judgement and weight of evidence determination.

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M-Factor (Chronic aquatic toxicity) : 1

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**Toxicity to fish : LC50: 0.85 mg/l  
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 0.015 mg/l  
Exposure time: 48 hToxicity to algae/aquatic plants : IC50: 0.03 mg/l  
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.032 mg/l  
Exposure time: 34 dToxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0042 mg/l  
Exposure time: 21 d

M-Factor (Chronic aquatic toxicity) : 1

**Persistence and degradability****Components:****Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)):**Biodegradability : Result: Readily biodegradable.  
Biodegradation: 95.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
Remarks: Based on data from similar materials**Didecyldimethylammonium chloride:**Biodegradability : Concentration: 10 mg/l  
Result: Readily biodegradable.  
Biodegradation: 72 %  
Exposure time: 28 d  
Method: OECD 301B/ ISO 9439/ EEC 84/449 C5  
GLP: yes**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**Biodegradability : Concentration: 5 mg/l  
Result: Readily biodegradable.  
Biodegradation: 95.5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

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Bioaccumulation : Remarks: Bioaccumulation is unlikely.

**Didecyldimethylammonium chloride:**Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 81  
Exposure time: 46 d**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**Bioaccumulation : Bioconcentration factor (BCF): 79  
Exposure time: 35 d  
Concentration: 0.076 mg/l  
GLP: yes  
Remarks: Does not bioaccumulate.**Mobility in soil****Components:****Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)):**Mobility : Medium: Soil  
Remarks: immobile**Didecyldimethylammonium chloride:**

Mobility : Remarks: Mobile in soils

**Alkyl (C12-16) dimethylbenzyl ammonium chloride:**

Mobility : Remarks: No data available

**Other adverse effects****Product:**

Additional ecological information : No data is available on the product itself.

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : 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.

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**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

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**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

none

**Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.**Environmental Protection and Management Act and : Not applicable  
Environmental Protection and Management (Hazardous Substances) RegulationsFire Safety (Petroleum and Flammable Materials) : Not applicable  
Regulations

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**16. OTHER INFORMATION**

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

Date format : dd.mm.yyyy

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); Ec<sub>x</sub> - Concentration associated with x% response; El<sub>x</sub> - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErC<sub>x</sub> - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - In-

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ternational 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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.

