

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke 

mikrozyd® sensitive liquid

No Change Service!

Version
03.00

Revision Date:
02.03.2016

Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

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

1.1 Product identifier

Trade name : mikrozyd® sensitive liquid

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

Use of the Sub-
stance/Mixture : Disinfectants and general biocidal products

Recommended restrictions
on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Supplier : 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

E-mail address of person
responsible for the
SDS/Contact person : Application Department HI
+49 (0)40/ 521 00 544
ADHI@schuelke.com
(Schülke & Mayr UK Ltd.: +44-1142543500)

1.4 Emergency telephone number

Emergency telephone num-
ber : UK Poisons Emergency number: 0870 600 6266

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute aquatic toxicity, Category 1

H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 3

H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

: Warning

Hazard statements

: H400
H412

Very toxic to aquatic life.

Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke 

mikrozyd® sensitive liquid

No Change Service!

Version
03.00

Revision Date:
02.03.2016

Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

Precautionary statements : P273 Avoid release to the environment.
P501 Dispose of contents/ container to an approved waste disposal plant.

Further information : Use biocides safely. Always read the label and product information before use.

2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). No special risks known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Aqueous solution

Hazardous components

Chemical name	Index-Number CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16))	- - - 68424-85-1 270-325-2 01-2119970550-39-XXXX	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0,3
Didecyldimethyl-ammonium chloride	612-131-00-6 7173-51-5 230-525-2	Acute Tox. 3; H301 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0,3
Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14))	- - - 85409-23-0 287-090-7	Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	< 0,3

For explanation of abbreviations see section 16.

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 : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed : Do NOT induce vomiting. Drink water as a precaution. Consult

mikrozyd® sensitive liquid**No Change Service!**Version
03.00Revision Date:
02.03.2016Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

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, Foam, Water spray jet, Carbon dioxide (CO₂)

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : none

Specific risk from the substance or the product itself, its combustion products or evolved gases : No special risks to be expected.

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 upMethods 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 : No special protective measures against fire required.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

mikroZid® sensitive liquid

No Change Service!

Version
03.00

Revision Date:
02.03.2016

Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

fire and explosion

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. Keep away from heat. Keep away from direct 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) : The product falls under the regulation on biocide products (EU) 528/2012.
Product type: 2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

none

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16))	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) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16))	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

8.2 Exposure controls

Personal protective equipment

- Eye protection : If splashes are likely to occur, wear:
Safety glasses with side-shields conforming to EN166
- Hand protection Directive : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke 

mikroZid® sensitive liquid

No Change Service!

Version
03.00

Revision Date:
02.03.2016

Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

derived from it.

Remarks : Splash protection: disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0,11 mm) made by KCL or gloves from other manufacturers offering the same protection. 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.

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 : 6 - 8, 20 °C, concentrate
Melting point/freezing point : ca. 0 °C
Decomposition temperature : Not applicable
Boiling point/boiling range : ca. 100 °C
Flash point : Not applicable
Other information: The product is not flammable.
Evaporation rate : not determined
Flammability (solid, gas) : Not applicable
Upper explosion limit : Not applicable
Lower explosion limit : Not applicable
Vapour pressure : No data available
vapour density : Not applicable
Density : ca. 1 g/cm³, 20 °C
Solubility(ies)
Water solubility : in all proportions , 20 °C
Partition coefficient: n-octanol/water : Not applicable
Auto-ignition temperature : Not applicable
Viscosity
Viscosity, dynamic : not determined
Explosive properties : Not explosive
Oxidizing properties : Not applicable

9.2 Other information

No data available

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.

mikrozyd® sensitive liquid**No Change Service!**Version
03.00Revision Date:
02.03.2016Date of last issue: 22.06.2015
Date of first issue: 21.04.2007**10.3 Possibility of hazardous reactions**

None reasonably foreseeable.

10.4 Conditions to avoid

Protect from frost, heat and sunlight.

10.5 Incompatible materials

Do not mix with other products.,

10.6 Hazardous decomposition products

None reasonably foreseeable.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity****Product:**

Acute oral toxicity : Acute toxicity estimate: > 10000 mg/kg
Acute inhalation toxicity : Acute toxicity estimate: > 50 mg/l
Acute dermal toxicity : Acute toxicity estimate: > 15000 mg/kg

Skin corrosion/irritation**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Corrosive

Didecyldimethyl-ammonium chloride:

Rabbit, 4 h, OECD Test Guideline 404, Corrosive

Serious eye damage/eye irritation**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Corrosive

Didecyldimethyl-ammonium chloride:

Corrosive

Respiratory or skin sensitisation**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Did not cause sensitisation on laboratory animals. Guinea pig

Didecyldimethyl-ammonium chloride:

Did not cause sensitisation on laboratory animals. Buehler Test, Guinea pig

Germ cell mutagenicity**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Genotoxicity in vitro : Not mutagenic in Ames Test

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

Didecyldimethyl-ammonium chloride:

Genotoxicity in vitro : OECD Test Guideline 471, Not mutagenic in Ames Test

Genotoxicity in vivo : Mutagenicity (in vivo mammalian bone-marrow cytogenetic

mikroZid® sensitive liquid**No Change Service!**Version
03.00Revision Date:
02.03.2016Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

test, chromosomal analysis), Rat, Oral, OECD Test Guideline 475, negative
Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

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

Didecyldimethyl-ammonium chloride:

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

Reproductive toxicity**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

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

Didecyldimethyl-ammonium chloride:

Reproductive toxicity - Assessment : No data available

STOT - single exposure**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

No data available

Didecyldimethyl-ammonium chloride:

No data available

STOT - repeated exposure**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

No data available

Didecyldimethyl-ammonium chloride:

No data available

Aspiration toxicity

No data available

Further information**Product:**

No data is available on the product itself.

SECTION 12: Ecological information**12.1 Toxicity****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

mikroZid® sensitive liquid**No Change Service!**Version
03.00Revision Date:
02.03.2016Date of last issue: 22.06.2015
Date of first issue: 21.04.2007**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Toxicity to fish	: LC50 : 0,85 mg/l, 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna): 0,015 mg/l, 48 h
Toxicity to algae	: IC50 : 0,03 mg/l, 72 h
M-Factor (Acute aquatic toxicity)	: 10
Toxicity to fish (Chronic toxicity)	: NOEC: 0,032 mg/l , 34 d, Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 0,0042 mg/l , 21 d, Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	: 1

Didecyldimethyl-ammonium chloride:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): 0,19 mg/l, 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0,062 mg/l, 48 h
Toxicity to algae	: ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,026 mg/l, 96 h
M-Factor (Acute aquatic toxicity)	: 10
Toxicity to fish (Chronic toxicity)	: NOEC: 0,032 mg/l , 34 d, Pimephales promelas (fathead minnow), OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 0,010 mg/l , 21 d, Daphnia magna (Water flea), OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	: 1

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

Toxicity to fish	: LC50 (Fish): 0,28 mg/l, 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna): 0,0059 mg/l, 48 h
M-Factor (Acute aquatic toxicity)	: 100

12.2 Persistence and degradability**Product:**

Chemical Oxygen Demand (COD) : ca. 200 mg/l ,1% solution

Components:**Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Biodegradability : Readily biodegradable, OECD 301D / EEC 84/449 C6

Didecyldimethyl-ammonium chloride:

Biodegradability : Readily biodegradable, OECD 301B/ ISO 9439/ EEC 84/449 C5

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

Biodegradability : Totally biodegradable

mikroZid® sensitive liquid**No Change Service!**Version
03.00Revision Date:
02.03.2016Date of last issue: 22.06.2015
Date of first issue: 21.04.2007**12.3 Bioaccumulative potential****Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Bioaccumulation : Does not bioaccumulate.

Didecyldimethyl-ammonium chloride:

Bioaccumulation : Lepomis macrochirus (Bluegill sunfish), 46 d, Bioconcentration factor (BCF): 81

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

Bioaccumulation : Bioaccumulation is unlikely.

12.4 Mobility in soil**Components:****Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-C16)):**

Mobility : No data available

Didecyldimethyl-ammonium chloride:

Mobility : Mobile in soils

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

Mobility : Soil immobile

12.5 Results of PBT and vPvB assessment**Product:**

Assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

12.6 Other adverse effects**Product:**

Additional ecological information : none

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

Product : Dispose of the product according to the defined EWC (European Waste Code) No.

Contaminated packaging : Take empty packaging to the recycling plant.

Waste key for the unused product : European waste catalog (EWC) 070601

Waste key for the unused product(Group) : Waste material of HZVA from fats, lubricants, soaps, detergents, disinfectants and personal protection products.

SECTION 14: Transport information**14.1 UN number**

ADR : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke 

mikrozyd® sensitive liquid

No Change Service!

Version
03.00

Revision Date:
02.03.2016

Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

(Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)))

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)))

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Alkyl (C12-C14) ethylbenzylammonium chloride (ADEBAC (C12-C14)))

14.3 Transport hazard class(es)

ADR : 9 (N)
IMDG : 9 (N)
IATA : 9 (N)

14.4 Packing group

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9 (N)
Tunnel restriction code : E

IMDG
Packing group : III
Labels : 9 (N)
EmS Code : F-A, S-F

IATA
Packing instruction (cargo aircraft) : 964
Packing group : III
Labels : Miscellaneous, Environmentally Hazardous

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

For personal protection see section 8.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 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

Legislation on the control of major-accident hazards in- : Directive 96/82/EC does not apply

mikrozyd® sensitive liquid**No Change Service!**Version
03.00Revision Date:
02.03.2016

Date of last issue: 22.06.2015

Date of first issue: 21.04.2007

volving dangerous substances

Volatile organic compounds : none, Directive 2010/75/EC on the limitation of emissions of volatile organic compounds

Other regulations : The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer. Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values. Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products

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.
 H400 : Very toxic to aquatic life.
 H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
 Aquatic Acute : Acute aquatic toxicity
 Aquatic Chronic : Chronic aquatic toxicity
 Skin Corr. : Skin corrosion

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing 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 Organisa-

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

schülke 

mikrozyd® sensitive liquid

No Change Service!

Version
03.00

Revision Date:
02.03.2016

Date of last issue: 22.06.2015
Date of first issue: 21.04.2007

tion 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; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Changes compared with the previous edition!!!

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.