



smartBiozid

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11/16/2022 Revision date: 11/16/2022 Supersedes version of: 3/30/2020 Version: 2.00

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

1.1. Product identifier

Product form : Mixture
Trade name : smartBiozid
Article number : REF 208198 / REF 208199

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Medical device
Germicide
Cleaning agent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Alfred Becht GmbH
Carl-Zeiss-Str. 16
P.O. Box 1145
77656 Offenburg
T +49 781 60586-0 - F +49 781 60586-40

Email competent person

sds@kft.de

Distributor

OMNIDENT Dental-Handelsgesellschaft m.b.H
Gutenbergring 5
D-63110 Rodgau
T +49 (6106) 8 74 - 0 - F +49 (6106) 8 74 - 265
www.omnident.de

1.4. Emergency telephone number

Emergency number : Poisoning Information Centre Freiburg +49 761 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP) : -
Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P273 - Avoid release to the environment.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Ethanol (64-17-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
didecyldimethylammonium chloride (7173-51-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
propan-2-ol (67-63-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Germicide
Mixture of the substances listed below with non-hazardous additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol substance with national workplace exposure limit(s) (DE)	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5	$\geq 0.25 - < 1$	Flam. Liq. 2, H225 Eye Irrit. 2, H319
didecyldimethylammonium chloride	CAS-No.: 7173-51-5 EC-No.: 230-525-2 EC Index-No.: 612-131-00-6	$\geq 0.25 - < 1$	Acute Tox. 3 (Oral), H301 (ATE=264 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	CAS-No.: 68424-85-1 EC-No.: 270-325-2	≥ 0.25 – < 1	Acute Tox. 4 (Oral), H302 (ATE=795 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides	CAS-No.: 85409-23-0 EC-No.: 287-090-7	≥ 0.25 – < 1	Acute Tox. 4 (Oral), H302 (ATE=344 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
propan-2-ol substance with national workplace exposure limit(s) (DE)	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0	≥ 0.1 – < 0.25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Ethanol	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5	(50 ≤C < 100) Eye Irrit. 2, H319

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: When in doubt or if symptoms are observed, get medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Get medical advice if skin irritation persists.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Consult an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide. Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non flammable.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon dioxide. Carbon monoxide. Nitrogen oxides. Hydrogen chloride.

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5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.
- Other information : Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid contact with skin and eyes. Ensure adequate air ventilation. Do not breathe gas/vapour/aerosol.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid sub-soil penetration. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes.
- Hygiene measures : Immediately remove contaminated or damp clothing. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Protect against frost. Store in a well-ventilated place. Keep cool. Keep container tightly closed.
- Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Follow the directions!.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

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propan-2-ol (67-63-0)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Propan-2-ol
AGW (OEL TWA) [1]	500 mg/m ³
AGW (OEL TWA) [2]	200 ppm
Peak exposure limitation factor	2(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Propan-2-ol
Biological limit value	25 mg/l Parameter: Aceton - Untersuchungsmaterial: B = Vollblut, U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2012 DFG 25 mg/l Parameter: Aceton - Untersuchungsmaterial: U = Urin - Probenahmezeitpunkt: b) Expositionsende, bzw. Schichtende - Festlegung/Begründung: 11/2012 DFG
Regulatory reference	TRGS 903
Ethanol (64-17-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethanol
AGW (OEL TWA) [1]	380 mg/m ³
AGW (OEL TWA) [2]	200 ppm
Peak exposure limitation factor	4(II)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
8.1.2. Recommended monitoring procedures	
No additional information available	
8.1.3. Air contaminants formed	
No additional information available	
8.1.4. DNEL and PNEC	
didecyldimethylammonium chloride (7173-51-5)	
PNEC (Water)	
PNEC aqua (freshwater)	0.0011 mg/l
PNEC aqua (marine water)	0.00011 mg/l
PNEC aqua (intermittent, freshwater)	0.00021 mg/l
PNEC aqua (intermittent, marine water)	0.000021 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	61.86 mg/kg dwt

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didecyldimethylammonium chloride (7173-51-5)	
PNEC sediment (marine water)	6.186 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.4 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	0.14 mg/l
propan-2-ol (67-63-0)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	1000 mg/m ³
Long-term - systemic effects, dermal	888 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	500 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	178 mg/m ³
Acute - systemic effects, oral	51 mg/kg bodyweight
Long-term - systemic effects, oral	26 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	89 mg/m ³
Long-term - systemic effects, dermal	319 mg/kg bodyweight/day
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	5.7 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	3.96 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	3.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.64 mg/m ³
Long-term - systemic effects, dermal	3.4 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.0009 mg/l
PNEC aqua (marine water)	0.00096 mg/l
PNEC aqua (intermittent, freshwater)	0.00016 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	12.27 mg/kg dwt
PNEC sediment (marine water)	13.09 mg/kg dwt
PNEC (Soil)	
PNEC soil	7 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	0.4 mg/l
Ethanol (64-17-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	8238 mg/kg bodyweight/day

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Ethanol (64-17-5)	
Long-term - systemic effects, inhalation	380 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	114 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.96 mg/l
PNEC aqua (marine water)	0.79 mg/l
PNEC aqua (intermittent, freshwater)	2.75 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3.6 mg/kg dwt
PNEC sediment (marine water)	2.9 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.63 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	0.38 kg/kg food
PNEC (STP)	
PNEC sewage treatment plant	580 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Use splash goggles when eye contact due to splashing is possible. EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. EN 13034

Hand protection:

In case of repeated or prolonged contact wear gloves. Chemically resistant protective gloves. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemically resistant protective gloves	Nitrile rubber	6 (> 480 minutes)	0,11	3 (> 0.65)	EN ISO 374

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8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Breathing apparatus with filter. A-P2. EN 143. Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: colourless.
Appearance	: clear.
Odour	: Neutral.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: Not applicable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not applicable
Auto-ignition temperature	: Not self-igniting
Decomposition temperature	: Not available
pH	: < 10
Viscosity, kinematic	: (Water)
Viscosity, dynamic	: (Water)
Solubility	: Water: Soluble
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: Not applicable
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1 g/cm ³
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

smartBiozid	
ATE CLP (oral)	> 2000 mg/kg bodyweight
didecyldimethylammonium chloride (7173-51-5)	
LD50 oral rat	264 mg/kg bodyweight (female; (OECD 401 method))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402 method)
propan-2-ol (67-63-0)	
LD50 oral rat	5840 mg/kg bodyweight (OECD 401 method)
LD50 dermal rabbit	16.4 ml/kg (OECD 402 method)
LC50 Inhalation - Rat [ppm]	> 10000 ppm (6 h; (OECD 403 method))
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)	
LD50 oral rat	795 mg/kg (OECD 401 method)
LD50 dermal rabbit	≈ 3412 mg/kg (24 h)
Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)	
LD50 oral rat	344 mg/kg bodyweight
LD50 dermal rabbit	≈ 2300 mg/kg bodyweight (1150 mg a.i./kg bw; (OECD 402 method))
Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg bodyweight (OECD 401 method)
LC50 Inhalation - Rat (Vapours)	124.7 mg/l/4h (OECD 403)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: < 10

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Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: < 10
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)

propan-2-ol (67-63-0)

STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

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Viscosity, kinematic	(Water)
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

didecyldimethylammonium chloride (7173-51-5)

LC50 - Fish [1]	0.49 mg/l (96 h; Brachydanio rerio (zebra-fish); (OECD 203 method))
EC50 - Crustacea [1]	≈ 0.057 mg/l (48 h; Daphnia magna; (OECD 202 method))
ErC50 algae	0.062 mg/l (72 h; Pseudokirchnerella subcapitata (OECD 201 method))
NOEC chronic crustacea	0.021 mg/l (21 d; Daphnia magna; (OECD 211 method))
NOEC chronic algae	0.013 mg/l (OECD 201 method)

propan-2-ol (67-63-0)

LC50 - Fish [1]	9640 mg/l (96 h; Pimephales promelas; (OECD 203 method))
EC50 - Crustacea [1]	> 10000 mg/l (24 h; Daphnia magna;(OECD 202 method))
ErC50 algae	1800 mg/l (7 d; Scenedesmus quadricauda)
NOEC chronic algae	1800 mg/l (7d; Scenedesmus quadricauda)

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)

LC50 - Fish [1]	0.85 mg/l (96 h; Pimephales promelas; (OECD 203 method))
EC50 - Crustacea [1]	0.016 mg/l (48 h; Daphnia magna; (OECD 202 method))
ErC50 algae	0.03 mg/l (96 h; Pseudokirchneriella subcapitata;(OECD 201 method)
NOEC chronic crustacea	0.025 mg/l (21 d; Daphnia magna; (OECD 211 method))

Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)

LC50 - Fish [1]	≈ 1.06 mg/l (96 h; Oncorhynchus mykiss; (OECD 203 method))
EC50 - Crustacea [1]	0.01 – 0.015 mg/l (48 h; Daphnia magna; (OECD 202 method))
ErC50 algae	≈ 0.026 mg/l (72 h; Pseudokirchneriella subcapitata; (OECD 201 method))

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Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)	
NOEC chronic fish	≥ 0.0322 mg/l (28 d; Pimephales promelas)
NOEC chronic crustacea	≥ 0.00415 mg/l (21 d; Daphnia magna)
NOEC chronic algae	0.006 mg/l (72 h; Pseudokirchneriella subcapitata; (OECD 201 method))

Ethanol (64-17-5)	
LC50 - Fish [1]	14200 mg/l (96 h; Pimephales promelas; US EPA method E03-05)
EC50 - Crustacea [1]	5012 mg/l (48 h; Ceriodaphnia dubia; ASTM E729-80)
ErC50 algae	275 mg/l (72 h, Chlorella vulgaris, (OECD 201 method))
NOEC chronic fish	250 mg/l (120 h, Zebrafish, (OECD 212 method))
NOEC chronic crustacea	2 mg/l (10 d, Ceriodaphnia dubia)

12.2. Persistence and degradability

smartBiozid	
Persistence and degradability	The product has not been tested.

didecyldimethylammonium chloride (7173-51-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	69 % (28d)

propan-2-ol (67-63-0)	
Persistence and degradability	Readily biodegradable.
Biodegradation	53 % (5 d ; Test method EU C.5)

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 60 % (OECD 301D method)

Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)	
Persistence and degradability	Readily biodegradable.
Biodegradation	95.5 % (28 d; aerobic; (OECD 301B method))

Ethanol (64-17-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	84 % (20 d)

12.3. Bioaccumulative potential

smartBiozid	
Partition coefficient n-octanol/water (Log Pow)	Not applicable
Bioaccumulative potential	The product has not been tested.

didecyldimethylammonium chloride (7173-51-5)	
Partition coefficient n-octanol/water (Log Pow)	2.59 (20 °C; (OECD 105 method))

propan-2-ol (67-63-0)	
Partition coefficient n-octanol/water (Log Pow)	0.05 (25 °C)
Bioaccumulative potential	Bioaccumulation unlikely.

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Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)

Bioconcentration factor (BCF REACH)	79 (OECD 305 method)
Partition coefficient n-octanol/water (Log Kow)	2.88 (OECD 107 method)

Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)

Partition coefficient n-octanol/water (Log Pow)	≈ 2.48 (20 °C; (OECD 107 method))
Bioaccumulative potential	Low bioaccumulation potential.

Ethanol (64-17-5)

Partition coefficient n-octanol/water (Log Kow)	-0.35 (20 °C)
Bioaccumulative potential	Bioaccumulation unlikely.

12.4. Mobility in soil

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Ecology - soil	The product has not been tested.
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didecyldimethylammonium chloride (7173-51-5)

Surface tension	25.82 mN/m (OECD 115 method)
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propan-2-ol (67-63-0)

Ecology - soil	Expected to be highly mobile in soil.
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Quaternary ammonium compounds, C12-14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides (85409-23-0)

Ecology - soil	Low mobility (soil).
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Ethanol (64-17-5)

Surface tension	22.31 mN/m (20 °C)
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12.5. Results of PBT and vPvB assessment

smartBiozid

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Disposal must be done according to official regulations. European waste catalogue.
Sewage disposal recommendations	: Do not allow into drains or water courses.
Product/Packaging disposal recommendations	: Do not dispose of with domestic waste.
European List of Waste (LoW) code	: 07 01 01* - aqueous washing liquids and mother liquors
HP Code	: HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	propan-2-ol
3(b)	propan-2-ol
3(c)	smartBiozid
40.	propan-2-ol

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REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals):
Didecyldimethylammonium chloride (7173-51-5)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions	: Employment prohibitions or restrictions on the protection of young people at work according to § 22 JArbSchG in the case of formation of hazardous substances have to be observed.
National Rules and Recommendations	: TRGS 400: Risk Assessment for Activities involving Hazardous Substances. TRGS 510: Storage of hazardous substances in non-stationary containers. TRGS 900: Occupational Exposure Limits. TRGS 903: Biological limit values.
Water hazard class (WGK)	: WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
Storage class (LGK, TRGS 510)	: LGK 12 - Non-combustible liquids.
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

General revision.

Indication of changes			
Section	Changed item	Change	Comments
3.2	3. Composition/information on ingredients	Modified	

Abbreviations and acronyms:

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
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level

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Abbreviations and acronyms:

EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative

Data sources : ECHA (European Chemicals Agency). MSDSs of the suppliers.

Department issuing data specification sheet: : KFT Chemieservice GmbH
Im Leuschnerpark 3
D-64347 Griesheim

Phone: +49 6155-8981-400
Fax: +49 6155 8981-500
SDS Service: +49 6155 8981-522

Contact person : Dr. Maximilian Gatterdam

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

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Full text of H- and EUH-statements:	
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
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.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Aquatic Chronic 3	H412	Calculation method

KFT SDS EU 01

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.