

**Safety Data Sheet
ZETA 3 FOAM****Revision nr. 6
Dated 06/03/2023****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Mixture identification:
Product Name: ZETA 3 FOAM
Code: C810025, C810026

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

For professional use only. Liquid disinfectant for delicate medical device surfaces.

1.3. Details of the supplier of the safety data sheet

Name
Zhermack S.p.a
Via Bovazecchino 100
45021 Badia Polesine (RO)
Italy
tel. +39 0425-597611
fax +39 0425-597689

Competent person responsible for the safety data sheet:
msds@zhermack.com

1.4. Emergency telephone number

UK Emergency number: 999 (24 hours)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

EC regulation criteria 1272/2008 (CLP)

Skin Irrit. 2, H315 Causes skin irritation.

Eye Irrit. 2, H319 Causes serious eye irritation.

Aquatic Chronic 3, H412 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves and eye/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Special Provisions:

None

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Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Applicable

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
$\geq 0,5\%$ - < 2,5%	2-aminoethanol; ethanolamine	Index number: 603-030-00-8 CAS: 141-43-5 EC: 205-483-3 REACH No.: 01-21194864 55-28-XXXX	STOT SE 3 H335 May cause respiratory irritation. Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects. Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H312 Harmful in contact with skin. Acute Tox. 4 H332 Harmful if inhaled. Skin Corr. 1B H314 Causes severe skin burns and eye damage. Specific Concentration Limits: C $\geq 5\%$: STOT SE 3 H335 Acute Toxicity Estimate: ATE - Oral 1515 mg/kg bw ATE - Dermal 2504 mg/kg bw ATE - Inhalation (Dust/mist) 1,3 mg/l
$\geq 0,3\%$ - < 0,5%	didecyldimethylammonium chloride	Index number: 612-131-00-6 CAS: 7173-51-5 EC: 230-525-2	Aquatic Acute 1 H400 Very toxic to aquatic life. M=10. Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects. M=1. Acute Tox. 3 H301 Toxic if swallowed. Skin Corr. 1B H314 Causes severe skin burns and eye damage. Acute Toxicity Estimate: ATE - Oral 658 mg/kg bw
$\geq 0,05\%$ - < 0,1%	Quaternary ammonium compounds, benzyl-C12-16-alkyldi	CAS: 68424-85-1 EC: 270-325-2 REACH No.: 01-21199705	Aquatic Acute 1 H400 Very toxic to aquatic life. M=10. Aquatic Chronic 1 H410 Very toxic

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	methyl, chlorides	50-39-XXXX	to aquatic life with long lasting effects. M=1. Acute Tox. 4 H302 Harmful if swallowed. Skin Corr. 1B H314 Causes severe skin burns and eye damage. Acute Toxicity Estimate: ATE - Oral 344 mg/kg bw
<0,1%	Diphenyl ether	CAS: 101-84-8 EC: 202-981-2 REACH No.: 01-21194725 45-33-XXXX	Aquatic Acute 1 H400 Very toxic to aquatic life. M=1. Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects. Eye Irrit. 2 H319 Causes serious eye irritation.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

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Use suitable breathing apparatus .
 Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
 Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:
 Wear personal protection equipment.
 Remove persons to safety.
 See protective measures under point 7 and 8.
 For emergency responders:
 Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
 Retain contaminated washing water and dispose it.
 In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
 Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
 Don't use empty container before they have been cleaned.
 Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
 See also section 8 for recommended protective equipment.
 Advice on general occupational hygiene:
 Contaminated clothing should be changed before entering eating areas.
 Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.
 Incompatible materials:
 See section 10.5.
 Instructions as regards storage premises:
 Adequately ventilated premises.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ZETA 3 FOAM
 2-aminoethanol; ethanolamine - CAS: 141-43-5

OEL Type	TWA		Duratio n	STEL		Duratio n	Notes	Country
AGW	0.5 mg/m ³	0.2 ppm	8h	0.5 mg/m ³	0.2 ppm	15min	Inhalable fraction and vapour	GERMANY
MAK	0.51	0.2	8h	0.51	0.2	15min	Inhalable	GERMANY

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	mg/m3	ppm		mg/m3	ppm		fraction and vapour	
VME/VLE	5 mg/m3	2 ppm	8h	10 mg/m3	4 ppm	15min		SWITZERLAND
MV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		SLOVENIA
MAK	5 mg/m3	2 ppm	8h	10 mg/m3	4 ppm	15min		SWITZERLAND
AK	2.5 mg/m3		8h	7.6 mg/m3		15min		HUNGARY
GVI/KGVI	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		CROATIA
HTP	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		FINLAND
MAK	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		AUSTRIA
NDS/NDSCh	2.5 mg/m3		8h	7.5 mg/m3		15min		POLAND
NGV/KGV	2.5 mg/m3	1 ppm	8h	7.5 mg/m3	3 ppm	15min		SWEDEN
NPEL	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		SLOVAKIA (Slovak Republic)
EU	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm		Skin	
OELV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		IRELAND
RD	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		LITHUANIA
RV	0.5 mg/m3	0.2 ppm	8h	7.6 mg/m3	3 ppm	15min		LATVIA
TGG	2.5 mg/m3		8h	7.6 mg/m3		15min		NETHERLANDS
TLV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		GREECE
TLV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		ESTONIA
TLV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		MALTA
TLV	2.5 mg/m3	1 ppm	8h					NORWAY
TLV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		ROMANIA
TLV	2.5 mg/m3	1 ppm	8h	5 mg/m3	2 ppm	15min		DENMARK
TLV	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		BULGARIA
VL	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		LUXEMBOURG
VLE	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		PORTUGAL
VLEP	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		FRANCE

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VLEP	2.5 mg/m ³	1 ppm	8h	7.6 mg/m ³	3 ppm	15min	Skin	ITALY
VLEP	2.5 mg/m ³	1 ppm	8h	7.6 mg/m ³	3 ppm	15min		BELGIUM
WEL	2.5 mg/m ³	1 ppm	8h	7.6 mg/m ³	3 ppm	15min		UNITED KINGDOM
VLA	2.5 mg/m ³	1 ppm	8h	7.6 mg/m ³	3 ppm	15min	Skin	SPAIN
ACGIH		3 ppm	8h		6 ppm		Eye and skin irr	
TLV-ACGIH		3 ppm	8h		6 ppm	15min	Eye and skin irr	

didecyldimethylammonium chloride - CAS: 7173-51-5

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

Diphenyl ether - CAS: 101-84-8

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
AGW	7.1 mg/m ³	1 ppm	8h	7.1 mg/m ³	1 ppm	15min	Inhalable	GERMANY
MAK	7.1 mg/m ³	1 ppm	8h	7.1 mg/m ³	1 ppm	15min	Inhalable	GERMANY
OELV	7 mg/m ³	1 ppm	8h					IRELAND
NDS/NDSch	7 mg/m ³		8h	14 mg/m ³		15min		POLAND
TLV	5 mg/m ³	0.7 ppm	8h	10 mg/m ³	1.4 ppm	15min		ROMANIA
VLA	7.1 mg/m ³	1 ppm	8h	14.2 mg/m ³	2 ppm	15min		SPAIN
MAK	7 mg/m ³	1 ppm	8h	7 mg/m ³	1 ppm	15min		SWITZERLAND
WEL	7.1 mg/m ³	1 ppm	8h					UNITED KINGDOM
VLEP	7 mg/m ³	1 ppm	8h	14 mg/m ³	2 ppm	15min		BELGIUM
MAK	7 mg/m ³	1 ppm	8h					AUSTRIA
TLV	7 mg/m ³	1 ppm	8h	14 mg/m ³	2 ppm	15min		DENMARK
EU	7 mg/m ³	1 ppm	8h	14 mg/m ³	2 ppm			

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HTP	7 mg/m ³	1 ppm	8h	21 mg/m ³	3 ppm	15min		FINLAND
VLEP	7 mg/m ³	1 ppm	8h					FRANCE
ACGIH		1 ppm	8h		2 ppm		(V) - URT and eye irr, nausea	

DNEL Exposure Limit Values

2-aminoethanol; ethanolamine - CAS: 141-43-5

Worker Professional: 3.3 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Consumer: 2 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 1 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 0.24 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 3.75 mg/kg/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Diphenyl ether - CAS: 101-84-8

Worker Professional: 7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 59 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 25 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

2-aminoethanol; ethanolamine - CAS: 141-43-5

Target: Soil (agricultural) - Value: 0.037 mg/kg

Target: intermittent release - Value: 0.025 mg/l

Target: Freshwater sediments - Value: 0.434 mg/kg

Target: Marine water sediments - Value: 0.043 mg/kg

Target: Microorganisms in sewage treatments - Value: 100 mg/l

Target: Fresh Water - Value: 0.085 mg/l

Target: Marine water - Value: 0.009 mg/l

Diphenyl ether - CAS: 101-84-8

Target: Fresh Water - Value: 0 mg/l

Target: Marine water - Value: 0 mg/l

Target: Freshwater sediments - Value: 0.093 mg/kg

Target: Marine water sediments - Value: 0.009 mg/kg

Target: intermittent release - Value: 0.005 mg/l

Target: Microorganisms in sewage treatments - Value: 10 mg/l

Target: Soil (agricultural) - Value: 0.018 mg/kg

8.2. Exposure controls

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Eye protection:

Wear airtight protective goggles (EN 166).

Protection for skin:

Wear professional overalls and safety footwear (EN 14605).

Protection for hands:

Protect hands with work gloves (EN 374).

The following should be considered when choosing work glove material (EN 374): compatibility, degradation, failure time and permeability.

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The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered (e.g. TLV-TWA).

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	Transparent	--	--
Odour:	Lemon	--	--
Melting point/freezing point:	Not available	--	--
Boiling point or initial boiling point and boiling range:	Not available	--	--
Flammability:	Not available	--	--
Lower and upper explosion limit:	Not available	--	--
Flash point:	Not available	--	--
Auto-ignition temperature:	Not available	--	--
Decomposition temperature:	Not available	--	--
pH:	Not available	--	--
Kinematic viscosity:	Not available	--	--
Solubility in water:	Soluble	--	--
Solubility in oil:	Not available	--	--
Partition coefficient n-octanol/water (log value):	Not Relevant	--	--
Vapour pressure:	Not available	--	--
Density and/or relative density:	0.95-1.03 g/cm ³	--	--
Relative vapour density:	Not available	--	--
Particle characteristics:			
Particle size:	Not available	--	--

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

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Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Toxicological information of the product:

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a) acute toxicity

Not classified

b) skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

- Source: (Expert judgement).

c) serious eye damage/irritation

The product is classified: Eye Irrit. 2 H319

- Source: (Expert judgement).

d) respiratory or skin sensitisation

Not classified

e) germ cell mutagenicity

Not classified

f) carcinogenicity

Not classified

g) reproductive toxicity

Not classified

h) STOT-single exposure

Not classified

i) STOT-repeated exposure

Not classified

j) aspiration hazard

Not classified

Toxicological information of the main substances found in the product:

2-aminoethanol; ethanolamine - CAS: 141-43-5

a) acute toxicity

ATE - Oral 1515 mg/kg bw

ATE - Dermal 2504 mg/kg bw

ATE - Inhalation (Dust/mist) 1,3 mg/l

Test: LD50 - Route: Oral - Species: Rat 1515 mg/kg - Source: (OECD 401, MSDS supplier).

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Test: LC50 - Route: Inhalation - Species: Rat > 1.3 mg/l - Duration: ZHE_6H - Source: (IRT, MSDS supplier).

Test: LD50 - Route: Skin - Species: Rabbit 2504 mg/kg - Source: (OECD 402, MSDS supplier).

b) skin corrosion/irritation:

Species: Rabbit - Skin Corrosive - Source: (OECD 404, MSDS supplier).

c) serious eye damage/irritation:

Species: Rabbit - Eye Corrosive - Source: (OECD 405, MSDS supplier).

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig - Based on available data, the classification criteria are not met - Source: (OECD 406, MSDS supplier).

didecyldimethylammonium chloride - CAS: 7173-51-5

a) acute toxicity

ATE - Oral 658 mg/kg bw

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg - Source: (OECD 402, ECHA dossier).

Test: LD50 - Route: Oral - Species: Rat 658 mg/kg - Source: (OECD TG 401, ECHA dossier).

b) skin corrosion/irritation:

Species: Rabbit - Skin Irritant - Source: (OECD 404, MSDS supplier).

c) serious eye damage/irritation:

No data available for the product

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig - Negative - Source: (US-EPA, Buehler Test, MSDS supplier).

e) germ cell mutagenicity:

Test: In vitro - Species: Salmonella Typhimurium - Negative - Source: (OECD 471, Test di ames, MSDS supplier).

Test: In vivo - Route: Oral - Species: Rat - Negative - Source: (OECD 475, MSDS supplier).

f) carcinogenicity:

No data available for the product

g) reproductive toxicity:

No data available for the product

j) aspiration hazard:

No data available for the product

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1

a) acute toxicity

ATE - Oral 344 mg/kg bw

Test: LD50 - Route: Skin - Species: Rabbit 3412 mg/kg - Duration: 18207_24H - Source: (MSDS supplier).

Test: LD50 - Route: Oral - Species: Rat 344 mg/kg - Source: (MSDS supplier).

Test: LC50 - Route: Inhalation - Species: Rat 0.25 mg/l - Duration: 4h - Source: (OECD 403, MSDS supplier).

b) skin corrosion/irritation:

Species: Rabbit - Skin Corrosive - Source: (DOT, MSDS supplier).

c) serious eye damage/irritation:

Species: Rabbit - Eye Corrosive - Source: (DOT, MSDS supplier).

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig - Negative - Source: (OECD 406, MSDS supplier).

e) germ cell mutagenicity:

Test: In vitro - Negative - Source: (OECD 471; 473, MSDS supplier).

f) carcinogenicity:

No data available for the product

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- g) reproductive toxicity:
No data available for the product
 - h) STOT-single exposure:
No data available for the product
 - i) STOT-repeated exposure:
No data available for the product
 - j) aspiration hazard:
No data available for the product
- Diphenyl ether - CAS: 101-84-8
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (ECHA dossier).
 - b) skin corrosion/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met -
Source: (FIFRA-TSCA, GLP, ECHA dossier).
 - c) serious eye damage/irritation:
Species: Rabbit - Eye Irritant - Source: (ECHA dossier).
 - d) respiratory or skin sensitisation:
Test: Skin Sensitization - Based on available data, the classification criteria are not met
- Source: (epicutaneous test, ECHA dossier).
 - e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (ECHA dossier).
 - i) STOT-repeated exposure:
Route: Skin - Species: Rat - Negative - Source: (ECHA dossier).

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

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

Adopt good working practices, so that the product is not released into the environment.

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The product is classified: Aquatic Chronic 3 - H412

2-aminoethanol; ethanolamine - CAS: 141-43-5

- a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia 27.04 mg/l - Duration h: 48h (OECD 202, Daphnia magna, MSDS supplier).
Endpoint: IC50 - Species: Algae 2.8 mg/l - Duration h: 72h (OECD 201, Selenastrum capricornutum, MSDS supplier).
Endpoint: LC50 - Species: Fish 349 mg/l - Duration h: 96h (Cyprinus carpio, MSDS supplier).
- b) Aquatic chronic toxicity:
Endpoint: NOEC - Species: Fish 1.2 - Duration h: 30d (OECD 210, Oryzias latipes, MSDS supplier).
Endpoint: NOEC - Species: Daphnia 0.85 - Duration h: 21d (OECD 211, Daphnia magna, MSDS supplier).

didecyldimethylammonium chloride - CAS: 7173-51-5

- a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia 0.029 mg/l - Duration h: 48h (OECD 202, Daphnia magna, ECHA dossier).
Endpoint: LC50 - Species: Fish 0.49 mg/l - Duration h: 96h (OECD 203, Danio rerio, ECHA dossier).
Endpoint: NOEC - Species: Daphnia 0.021 mg/l (OECD 211, 21 d, Daphnia magna, ECHA dossier).
Endpoint: IC50 - Species: Algae 0.062 mg/l - Duration h: 72h (OECD 201, Pseudokirchneriella subcapitata, ECHA dossier).

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Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1

a) Aquatic acute toxicity:

Endpoint: IC50 - Species: Algae 0.049 mg/l - Duration h: 72h (OECD TG 201, Pseudokirchneriella subcapitata, MSDS supplier).

Endpoint: NOEC - Species: Daphnia 0.0042 mg/l (method EPA-FIFRA, Daphnia magna, 21 d, MSDS supplier).

Endpoint: EC50 - Species: Daphnia 0.016 mg/l - Duration h: 48h (OECD TG 202, Daphnia magna, 48 h, MSDS supplier).

Endpoint: LC50 - Species: Fish 0.515 mg/l - Duration h: 96h (method US-EPA, Lepomis macrochirus, MSDS supplier).

Endpoint: NOEC - Species: Fish 0.032 mg/l (method EPA-FIFRA, Pimephales promelas, 34 d, MSDS supplier).

Diphenyl ether - CAS: 101-84-8

a) Aquatic acute toxicity:

Endpoint: EC10 - Species: Fish 4.2 mg/l - Duration h: 96h (study report, Oncorhynchus mykiss, ECHA dossier).

Endpoint: EC50 - Species: Daphnia 1.7 mg/l - Duration h: 48h (OECD 202, Daphnia magna, ECHA dossier).

12.2. Persistence and degradability

2-aminoethanol; ethanolamine - CAS: 141-43-5

Biodegradability: Readily biodegradable

didecyldimethylammonium chloride - CAS: 7173-51-5

Biodegradability: Readily biodegradable

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - CAS: 68424-85-1

Biodegradability: Readily biodegradable

Diphenyl ether - CAS: 101-84-8

Biodegradability: Readily biodegradable

12.3. Bioaccumulative potential

Not available

12.4. Mobility in soil

Not available

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

None

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

Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information**14.1. UN number or ID number**

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

Not available

14.3. Transport hazard class(es)

Not available

14.4. Packing group

Not available

14.5. Environmental hazards

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ADR-Environmental Pollutant: No

IMDG-Marine pollutant: No

14.6. Special precautions for user

Not available

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**

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

Composition according to Annex VII.a of Reg. (EC) 648/2004:

< 5%: disinfectants, non-ionic surfactants, perfume (Limonene, Citral, Linalool, Citronellol).

WGK Classification (Water hazard class - Verwaltungsvorschrift wassergefährdende Stoffe)

WGK2 - Hazardous for water

Lagerklasse according to TRGS 510:

LGK 10: Combustible liquids

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

didecyldimethylammonium chloride.

California Proposition 65

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Substance(s) listed under California Proposition 65:
None.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.
Substances for which a Chemical Safety Assessment has been carried out:
2-aminoethanol; ethanolamine

SECTION 16: Other information

Full text of phrases referred to in Section 3:
H335 May cause respiratory irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2020/878.
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECHA – European Chemical Agency
GESTIS - Information system on hazardous substances of the German Social Accident Insurance
IARC – International Agency for Research on Cancer
IPCS INCHEM – International Programme on Chemical Safety
ISS – Istituto Superiore di Sanità
PubChem - open chemistry database at the National Institutes of Health (NIH)

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.

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ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.