Safety Data Sheet
ZETA 1 ULTRA

Revision nr. 8
Dated 03/03/2023

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

1.1. Product identifier

Mixture identification:

Product Name: ZETA 1 ULTRA

Code: C810000, C810003

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

For professional use only. Concentrated disinfectant and detergent for surgical and rotating instruments.

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)

Acute Tox. 4, H302 Harmful if swallowed.
Skin Corr. 1A, H314 Causes severe skin burns and eye damage.
Eye Dam. 1, H318 Causes serious eye damage.
STOT SE 3, H335 May cause respiratory irritation.
STOT RE 2, H373 May cause damage to organs through prolonged or repeated exposure.
Aquatic Acute 1, H400 Very toxic to aquatic life.
Aquatic Chronic 1, H410 Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Danger

Hazard statements:

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P260 Do not breathe vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER.

Special Provisions:
None

Contains
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides
2-aminoethanol; ethanolamine
Isotridecanol, ethoxylated

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

2.3. Other hazards

Classification of the mixture, with an extreme pH value, is based on the results of an in vitro test carried out in accordance with OECD guidelines (OECD Guidelines for the Testing of Chemicals, Part 435, adopted 28. Jul. 2015 “In vitro membrane Barrier Test Method for Skin Corrosion”) and GLP certified - Good Laboratory Practices. For more information refer to section 11.

No PBT, vPvB or endocrine disruptor substances present in concentration >= 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
>= 13% - < 20%	N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	CAS: 2372-82-9 EC: 219-145-8 REACH No.: 01-21199805 92-29-XXXX	Eye Dam. 1 H318 Causes serious eye damage. STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure. 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. 1A H314 Causes severe skin burns and eye damage. Acute Toxicity Estimate:

			ATE - Oral 243,6 mg/kg bw
>= 13% - < 20%	Quaternary ammonium compounds, benzyl-C12-16-alkyldi methyl, chlorides	CAS: 68424-85-1 EC: 270-325-2 REACH No.: 01-21199705 50-39-XXXX	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. 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
>= 10% - < 12,5%	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 >= 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
>= 1% - < 3%	Isotridecanol, ethoxylated	CAS: 69011-36-5	Acute Tox. 4 H302 Harmful if swallowed. Eye Dam. 1 H318 Causes serious eye damage. Acute Toxicity Estimate: ATE - Oral 2000 mg/kg bw
>= 0,5% - < 2,5%	Alcohols, C12-14, ethoxylated propoxylated	CAS: 68439-51-0	Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
>= 0,5% - < 2,5%	D-glucopyrasone, oligomeric, C10-16-alkyl glycosides	CAS: 110615-47-9 REACH No.: 01-21194894 18-23-XXXX	Skin Irrit. 2 H315 Causes skin irritation. Eye Dam. 1 H318 Causes serious eye damage. Specific Concentration Limits: C >= 30%: Skin Irrit. 2 H315 12% <= C < 30%: Eye Dam. 1 H318 C >= 30%: Eye Irrit. 2 H319
>= 0,5% - < 2,5%	N-dodecylpropane-1,3-diamine	CAS: 5538-95-4 EC: 226-902-6	Aquatic Acute 1 H400 Very toxic to aquatic life. M=1. Acute Tox. 4 H302 Harmful if swallowed.

			Skin Corr. 1A H314 Causes severe skin burns and eye damage. Acute Toxicity Estimate: ATE - Oral 500 mg/kg bw
>= 0,5% - < 2,5%	D-Glucopyranose, oligomers, decyl octyl glycosides	CAS: 68515-73-1 EC: 500-220-1 REACH No.: 01-21194885 30-36-XXXX	Eye Dam. 1 H318 Causes serious eye damage.
>= 0,1% - < 0,3%	Dodecylamine	CAS: 124-22-1 EC: 204-690-6	Asp. Tox. 1 H304 May be fatal if swallowed and enters airways. STOT SE 3 H335 May cause respiratory irritation. STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure. 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=10. Skin Corr. 1B H314 Causes severe skin burns and eye damage.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
OBTAIN IMMEDIATE MEDICAL ATTENTION.
Remove contaminated clothing immediatley 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 opthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.
Give nothing to eat or drink.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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 (CO_2).

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

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.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
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.
Use localized ventilation system.
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:
Contamined 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 1 ULTRA

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine - CAS: 2372-82-9

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
MAK	0.05 mg/m3		8h	0.4 mg/m3		15min	Inhalable	SWITZERLAND
MAK	0.05 mg/m3		8h	0.4 mg/m3		15min	Inhalable	GERMANY

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

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

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

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
AGW	0.5 mg/m3	0.2 ppm	8h	0.5 mg/m3	0.2 ppm	15min	Inhalable fraction and vapour	GERMANY
MAK	0.51 mg/m3	0.2 ppm	8h	0.51 mg/m3	0.2 ppm	15min	Inhalable fraction and vapour	GERMANY
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
VLEP	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min	Skin	ITALY
VLEP	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		BELGIUM
WEL	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	3 ppm	15min		UNITED KINGDOM
VLA	2.5 mg/m3	1 ppm	8h	7.6 mg/m3	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	

Isotridecanol, ethoxylated - CAS: 69011-36-5

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

Alcohols, C12-14, ethoxylated propoxylated - CAS: 68439-51-0

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

D-glucopyrasone, oligomeric, C10-16-alkyl glycosides - CAS: 110615-47-9

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

N-dodecylpropane-1,3-diamine - CAS: 5538-95-4

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

D-Glucopyranose, oligomers, decyl octyl glycosides - CAS: 68515-73-1

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

Dodecylamine - CAS: 124-22-1

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
No data available								

DNEL Exposure Limit Values

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine - CAS: 2372-82-9

Consumer: 0.2 mg/kg/d - Exposure: Human Oral - Frequency: Short Term, systemic effects
Consumer: 0.7 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 2.35 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 0.54 mg/cm2 - Exposure: Human Dermal - Frequency: Short Term, systemic effects
Worker Professional: 0.92 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

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

D-glucopyrasone, oligomeric, C10-16-alkyl glycosides - CAS: 110615-47-9

Consumer: 35.7 mg/kg bw/d - Exposure: Human Oral - Frequency: Long Term, systemic effects
Consumer: 124 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 420 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 357000 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 595000 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

D-Glucopyranose, oligomers, decyl octyl glycosides - CAS: 68515-73-1

Consumer: 35.7 mg/kg/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 124 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 420 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 357000 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 595000 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine - CAS: 2372-82-9

Target: Fresh Water - Value: 0.001 mg/l
Target: Marine water - Value: 0 mg/l
Target: Freshwater sediments - Value: 8.5 mg/kg
Target: Marine water sediments - Value: 0.85 mg/kg
Target: intermittent release - Value: 0 mg/l
Target: Microorganisms in sewage treatments - Value: 1.33 mg/l
Target: Soil (agricultural) - Value: 45.34 mg/kg

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

D-glucopyrasone, oligomeric, C10-16-alkyl glycosides - CAS: 110615-47-9

Target: Fresh Water - Value: 0.176 mg/l
Target: Marine water - Value: 0.018 mg/l
Target: Freshwater sediments - Value: 1.516 mg/kg
Target: Marine water sediments - Value: 0.065 mg/kg
Target: Microorganisms in sewage treatments - Value: 5000 mg/l
Target: Food chain - Value: 111.11 mg/kg
Target: Soil (agricultural) - Value: 0.654 mg/kg
Target: intermittent release - Value: 0.029 mg/l

D-Glucopyranose, oligomers, decyl octyl glycosides - CAS: 68515-73-1

Target: Fresh Water - Value: 0.176 mg/l
Target: Marine water - Value: 0.018 mg/l
Target: Freshwater sediments - Value: 1.516 mg/kg
Target: Marine water sediments - Value: 0.152 mg/kg
Target: intermittent release - Value: 0.27 mg/l
Target: Microorganisms in sewage treatments - Value: 560 mg/l
Target: Food chain - Value: 111.11 mg/kg
Target: Soil (agricultural) - Value: 0.654 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:

Permeation Resistance. Class: G, D, O (EN 374).
The following should be considered when choosing work glove material (EN 374): compatibility, degradation, failure time and permeability.
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:
Mask with filter ABEK
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:	Green	--	--
Odour:	Characteristic	--	--
Melting point/freezing point:	-8°C	--	--
Boiling point or initial boiling point and boiling range:	>100°C	--	--
Flammability:	Not available	--	--
Lower and upper explosion limit:	Not available	--	--
Flash point:	> 135°C ° C	EN ISO 3679	--
Auto-ignition temperature:	Not available	--	--
Decomposition temperature:	Not available	--	--
pH:	12.6	--	--
Kinematic viscosity:	Not available	--	--
Solubility in water:	Soluble	--	--
Solubility in oil:	Not available	--	--
Partition coefficient n-octanol/water (log value):	Not available	--	--
Vapour pressure:	Not available	--	--
Density and/or relative density:	1.01 g/cm3	--	--
Relative vapour density:	Not available	--	--
Particle characteristics:			
Particle size:	Not available	--	--

9.2. Other information

Properties	Value	Method:	Notes
Viscosity:	160 cP	Brookfield; ULA, 23°C, 45 RPM	--

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable under normal conditions
10.2. Chemical stability
Stable under normal conditions
10.3. Possibility of hazardous reactions
None
10.4. Conditions to avoid
Heat, direct sunlight.
10.5. Incompatible materials
Strong acids and alkalis, peroxides, metal powders, strong oxidants and free radical initiators.
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:
ZETA 1 ULTRA
a) acute toxicity
The product is classified: Acute Tox. 4 H302
ATEmix - Oral 796,947 mg/kg bw
b) skin corrosion/irritation
The product is classified: Skin Corr. 1A H314
Test: In vitro - Notes: Cat. 1C - Skin Corrosive - Source: (OECD 435, study report 2018).
c) serious eye damage/irritation
The product is classified: Eye Dam. 1 H318
Test: In vitro - Eye Corrosive - Source: (OECD 435, study report 2018).
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
The product is classified: STOT SE 3 H335
i) STOT-repeated exposure
The product is classified: STOT RE 2 H373
j) aspiration hazard
Not classified

Toxicological information of the main substances found in the product:
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine - CAS: 2372-82-9
a) acute toxicity
ATE - Oral 243,6 mg/kg bw
Test: LD50 - Route: Skin - Species: Rat > 600 mg/kg - Source: (OECD TG 402, MSDS supplier).

Test: LD50 - Route: Oral - Species: Rat 243.6 mg/kg - Source: (OECD TG 401, 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 - Negative - Source: (OECD 406, Buehler Test, MSDS supplier).

e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (OECD 471, 476, 473; MSDS supplier).

f) carcinogenicity:
Species: Rat - Negative - Source: (OECD 453, MSDS supplier).

g) reproductive toxicity:
Species: Rat - Negative - Source: (MSDS supplier).

i) STOT-repeated exposure:
Test: NOAEL - Route: Oral - Species: Rat 9 mg/kg - Source: (OECD TG 408, MSDS supplier).
Test: NOAEL - Route: Skin - Species: Rat 15 mg/kg - Source: (US-EPA, MSDS supplier).

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

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

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).

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).

Isotridecanol, ethoxylated - CAS: 69011-36-5

a) acute toxicity
ATE - Oral 2000 mg/kg bw
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (OECD 423, ECHA dossier).
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg - Source: (OECD 402, ECHA dossier).
Test: LC50 - Route: Inhalation - Species: Rat > 1.6 mg/l - Duration: 4h - Source: (OECD 403, ECHA dossier).

b) skin corrosion/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (OECD 404, MSDS supplier).

c) serious eye damage/irritation:
Species: Rabbit - Eye Corrosive - Source: (Draize test, MSDS supplier).

Alcohols, C12-14, ethoxylated propoxylated - CAS: 68439-51-0

a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rat > 5000 mg/kg - Source: (MSDS supplier).
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (OECD 401, MSDS supplier).

b) skin corrosion/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (OECD 404, MSDS supplier).

c) serious eye damage/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (Draize test, 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, Guinea pig maximization test, MSDS supplier).

e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (OECD 471, Ames test, MSDS supplier).

f) carcinogenicity:
No data available for the product

g) reproductive toxicity:
No data available for the product

i) STOT-repeated exposure:
Route: Oral - Negative - Source: (MSDS supplier).

D-glucopyrasone, oligomeric, C10-16-alkyl glycosides - CAS: 110615-47-9

a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg - Source: (similar to OECD 402, GLP, ECHA dossier).
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: (OECD 401, GLP, ECHA dossier).

b) skin corrosion/irritation:
Species: Rabbit Yes - Skin Irritant - Source: (OECD 404, GLP, in vivo, ECHA dossier).

c) serious eye damage/irritation:
Species: Rabbit Yes - Eye Corrosive - Source: (OECD 405, GLP, in vivo, ECHA dossier).
d) respiratory or skin sensitisation:
Test: Skin Sensitization - Species: Guinea pig - Based on available data, the classification criteria are not met - Source: (OECD 406, GLP, in vivo, ECHA dossier).
e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (OECD 473, GLP, ECHA dossier).
Test: In vivo - Species: Rat - Negative - Source: (OECD 474, GLP, ECHA dossier).
g) reproductive toxicity:
Test: Reproductive Toxicity - Route: Oral - Species: Rat - Negative - Source: (OECD 421, ECHA dossier).
Test: Developmental toxicity - Route: Oral - Species: Rat - Negative - Source: (OECD 414, ECHA dossier).
i) STOT-repeated exposure:
Route: Oral - Species: Rat - Based on available data, the classification criteria are not met - Source: (EU Method B.26, ECHA dossier).
N-dodecylpropane-1,3-diamine - CAS: 5538-95-4
a) acute toxicity
ATE - Oral 500 mg/kg bw
Test: STA - Route: Oral 500 - Source: Table 3.2.1 - annex I CLP
D-Glucopyranose, oligomers, decyl octyl glycosides - CAS: 68515-73-1
a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Source: (OECD 402, GLP, ECHA dossier).
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (OECD 423, GLP, ECHA dossier).
b) skin corrosion/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (OECD 404, GLP, in vivo, ECHA dossier).
c) serious eye damage/irritation:
Species: Rabbit - Eye Corrosive - Source: in vivo, ECHA dossier).
d) respiratory or skin sensitisation:
Test: Skin Sensitization - Based on available data, the classification criteria are not met - Source: (read-across, EU Method B.6, GLP, in vivo, ECHA dossier).
e) germ cell mutagenicity:
Test: In vitro Negative - Source: (similar to OECD 476, GLP, mammalian cell gene mutation assay, ECHA dossier).
f) carcinogenicity:
No data available for the product
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
Dodecylamine - CAS: 124-22-1
a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rat 2000 mg/kg - Source: (ECHA dossier).
Test: LD50 - Route: Oral - Species: Rat 2000 mg/kg - Source: (ECHA dossier).

11.2. Information on other hazards

Endocrine disrupting properties:
No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

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

ZETA 1 ULTRA

The product is classified: Aquatic Acute 1 - H400; Aquatic Chronic 1 - H410

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine - CAS: 2372-82-9

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 0.073 mg/l - Duration h: 48h (US_EPA, Daphnia magna, MSDS supplier).
Endpoint: IC50 - Species: Algae 0.054 mg/l - Duration h: 72h (US-EPA, Pseudokirchneriella subcapitata, MSDS supplier).
Endpoint: LC50 - Species: Fish 0.68 mg/l - Duration h: 96h (OECD TG 203, Oncorhynchus mykiss, MSDS supplier).
Endpoint: NOEC - Species: Daphnia 0.024 mg/l (OECD TG 211, Daphnia magna, MSDS supplier).
Endpoint: NOEC - Species: Algae 0.0069 mg/l (OECD 201, Desmodesmus subspicatus, SDS supplier).
Endpoint: EC10 - Species: Algae 0.012 mg/l - Duration h: 72h (OECD 201, Desmodesmus subspicatus, SDS supplier).

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).

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).

Isotridecanol, ethoxylated - CAS: 69011-36-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 2.5 mg/l - Duration h: 96h (Danio rerio, ECHA dossier).
Endpoint: EC50 - Species: Daphnia 1.5 mg/l - Duration h: 48h (Daphnia magna, ECHA dossier).
Endpoint: EC50 - Species: Algae 2.5 mg/l - Duration h: 72h (Scenedesmus subspicatus, ECHA dossier).

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae 1.7 mg/l (Scenedesmus subspicatus, ECHA dossier).

Alcohols, C12-14, ethoxylated propoxylated - CAS: 68439-51-0

a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia < 10 mg/l - Duration h: 24h (OECD 202 Part 1, Daphnia magna, SDS supplier).
Endpoint: EC50 - Species: Algae < 10 mg/l - Duration h: 72h (OECD 201, Desmodesmus subspicatus, SDS supplier).
Endpoint: LC50 - Species: Fish < 10 mg/l - Duration h: 48h (DIN 38412 Part 15, Leuciscus idus, SDS supplier).
Endpoint: EC10 - Species: Algae < 1 mg/l - Duration h: 72h (OECD 201, Desmodesmus subspicatus, SDS supplier).

D-glucopyrasone, oligomeric, C10-16-alkyl glycosides - CAS: 110615-47-9
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia 14 mg/l - Duration h: 48h (Annex of 92/69/EWG, GLP, Daphnia magna, freshwater, ECHA dossier).
Endpoint: LC50 - Species: Fish 2.95 mg/l - Duration h: 96h (OECD 203, GLP, Danio rerio, freshwater, ECHA dossier).

D-Glucopyranose, oligomers, decyl octyl glycosides - CAS: 68515-73-1
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48h (OECD 202, Daphnia magna, freshwater, ECHA dossier).
Endpoint: LC50 - Species: Fish 100.81 mg/l - Duration h: 96h (ISO 7346/1-3, Danio rerio, freshwater, ECHA dossier).
Endpoint: NOEC - Species: Daphnia > 100 mg/l (similar to OECD 202, Daphnia magna, freshwater, ECHA dossier).
Endpoint: NOEC - Species: Fish 1.8 mg/l (OECD 204, read across, 28 d, Danio rerio, ECHA dossier).
Endpoint: EC10 - Species: Daphnia 1.76 (OECD 202, part II, read across, Daphnia magna, ECHA dossier).
Endpoint: IC50 - Species: Algae 37 mg/l - Duration h: 72h (DIN 38412, part 9, Scenedesmus subspicatus, ECHA dossier).

Dodecylamine - CAS: 124-22-1
a) Aquatic acute toxicity:
Endpoint: LC50 - Species: Fish 0.84 mg/l - Duration h: 96h (read-across, Danio rerio, ECHA dossier).
Endpoint: EC50 - Species: Daphnia 0.32 mg/l - Duration h: 48h (read-across, Daphnia magna, ECHA dossier).

12.2. Persistence and degradability

N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine - CAS: 2372-82-9
Biodegradability: Readily biodegradable

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

2-aminoethanol; ethanolamine - CAS: 141-43-5
Biodegradability: Readily biodegradable

Isotridecanol, ethoxylated - CAS: 69011-36-5
Biodegradability: Readily biodegradable

Alcohols, C12-14, ethoxylated propoxylated - CAS: 68439-51-0
Biodegradability: Readily biodegradable

D-glucopyrasone, oligomeric, C10-16-alkyl glycosides - CAS: 110615-47-9
Biodegradability: Readily biodegradable

D-Glucopyranose, oligomers, decyl octyl glycosides - CAS: 68515-73-1
Biodegradability: Readily biodegradable

Dodecylamine - CAS: 124-22-1
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 >= 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

ADR-UN Number:	1903
IATA-UN Number:	1903
IMDG-UN Number:	1903

14.2. UN proper shipping name

ADR-Shipping Name:	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.(N-(3-amminopropil)-N-dodecilpropan-1,3-diammina, Composti di ammonio quaternario, benzil-C12-16-alchildimetil, cloruri)
IATA-Shipping Name:	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.(N-(3-amminopropil)-N-dodecilpropan-1,3-diammina, Composti di ammonio quaternario, benzil-C12-16-alchildimetil, cloruri)
IMDG-Shipping Name:	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.(N-(3-amminopropil)-N-dodecilpropan-1,3-diammina, Composti di ammonio quaternario, benzil-C12-16-alchildimetil, cloruri)

14.3. Transport hazard class(es)

ADR-Class:	8
IATA-Class:	8
IATA-Label:	8
IMDG-Class:	8

14.4. Packing group

ADR-Packing Group:	III
IATA-Packing group:	III
IMDG-Packing group:	III

14.5. Environmental hazards

ADR-Enviromental Pollutant:	Yes
IMDG-Marine pollutant:	Marine Pollutant
Most important toxic component:	N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine
IMDG-EmS:	F-A , S-B

14.6. Special precautions for user

ADR-Subsidiary hazards: -
ADR-S.P.: 274
ADR-Transport category (Tunnel restriction code): 3 (E)
ADR - Hazard identification number: 80
IATA-Passenger Aircraft: 852
IATA-Subsidiary hazards: -
IATA-Cargo Aircraft: 856
IATA-S.P.: A3 A803
IATA-ERG: 8L
IMDG-Subsidiary hazards: -
IMDG-Stowage and handling: Category A
IMDG-Segregation: -

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:
Restriction 75

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

Seveso III category according to Annex 1, part 1
Product belongs to category: E1

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

15% = X < 30%: disinfectant;
5% = X < 15%: non-ionic surfactants;
<5%: *phosphonates.
*Content of Phosphorus (P) <0,5%

WGK Classification (Water hazard class - Verwaltungsvorschrift wassergefährdende Stoffe)
WGK2 - Hazardous for water

Lagerklasse according to TRGS 510:
LGK 8A: Combustible corrosive substances

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None.

California Proposition 65
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.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye 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
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
STOT RE 2	3.9/2	Specific target organ toxicity - repeated exposure, Category 2
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

Paragraphs modified from the previous revision:

SECTION 2: Hazards identification
SECTION 3: Composition/information on ingredients
SECTION 11: Toxicological information

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
Acute Tox. 4, H302	Calculation method
Skin Corr. 1A, H314	Calculation method
Eye Dam. 1, H318	Calculation method
STOT SE 3, H335	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 1, H410	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.

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.