



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

## Biguaton Spezial

Version number: 2.0  
Replaces version of: 2020-09-14 (1)

Revision: 2021-04-30  
First version: 2020-09-14

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

#### 1.1 Product identifier

<b>Trade name</b>	<b><u>Biguaton Spezial</u></b>
<b>Registration number (REACH)</b>	Not relevant (mixture).
<b>CAS number</b>	not relevant (mixture)

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

<b>Relevant identified uses</b>	Dip disinfection
<b>Uses advised against</b>	Do not use for squirting or spraying Do not use for products which come into direct contact with the skin

#### 1.3 Details of the supplier of the safety data sheet

PLIWA Hygiene GmbH Pliwa-Straße 2 34323 Malsfeld-Ostheim Germany	Telephone: +495661 / 7317 0 Telefax: +495661 / 7317 10 e-mail: info@pliwa.de Website: www.pliwa.de
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**e-mail (competent person)** sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact PLIWA Hygiene GmbH.

#### 1.4 Emergency telephone number

<b>Emergency information service</b>	PLIWA Hygiene GmbH +49 5661 / 7317 0 This number is only available during the following office hours: Monday-Friday 07:00 - 16:00.
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As above or nearest toxicological information centre.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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## Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP)

**Signal word** danger

### Pictograms

GHS05, GHS09



### Hazard statements

**H314** Causes severe skin burns and eye damage.

**H410** Very toxic to aquatic life with long lasting effects.

### Precautionary statements

**P260** Do not breathe mist/vapours/spray.

**P280** Wear protective gloves/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/doctor.

**P391** Collect spillage.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

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## Hazardous ingredients for labelling

1-Heptanol, 2-propyl-, 7EO  
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine  
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt  
N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate

## 2.3 Other hazards

This material is combustible, but will not ignite readily.

## Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients



### 3.1 Substances

Not relevant (mixture).







### 3.2 Mixtures

#### Description of the mixture


Aqueous solution, containing surfactants.  
Concentrate.

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
propan-2-ol	CAS No 67-63-0  EC No 200-661-7  Index No 603-117-00-0	5 - < 10	Flam. Liq. 2 / H225 Eye Irrit. 2 / H319 STOT SE 3 / H336	 	GHS-HC

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<b>Hazardous ingredients</b>					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
2-(2-butoxyethoxy)ethanol	CAS No 112-34-5  EC No 203-961-6  Index No 603-096-00-8  REACH Reg. No 01-2119475104-44-xxxx	5 – < 10	Eye Irrit. 2 / H319		GHS-HC IOELV
1-Heptanol, 2-propyl-, 7EO	CAS No 160875-66-1	1 – < 5	Acute Tox. 4 / H302 Eye Dam. 1 / H318		-
N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate	CAS No 94667-33-1  REACH Reg. No 01-2119950327-36-xxxx	1 – < 5	Acute Tox. 4 / H302 Skin Corr. 1B / H314 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		-
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	CAS No 2372-82-9  EC No 219-145-8	1 – < 5	Acute Tox. 3 / H301 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT RE 2 / H373 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		-
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	EC No 939-650-3	1 – < 5	Acute Tox. 4 / H302 Skin Corr. 1C / H314 Eye Dam. 1 / H318 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		-
alcohols, C12-15, ethoxylated	CAS No 68131-39-5  EC No 500-195-7	1 – < 5	Acute Tox. 4 / H302 Eye Dam. 1 / H318 Aquatic Chronic 3 / H412		-

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Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
ethylene glycol	CAS No 107-21-1  EC No 203-473-3  Index No 603-027-00-1	1 – <5	Acute Tox. 4 / H302 STOT RE 2 / H373		GHS-HC IOELV

### Notes

GHS- Harmonised classification (the classification of the substance corresponds to the entry in the list according to

HC: 1272/2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
1-Heptanol, 2-propyl-, 7EO	-	-	500 mg/kg	oral
N,N-Didecyl-N-methylpoly(oxyethyl) ammonium propionate	-	M-factor (acute) = 10.0 M-factor (chronic) = 10.0	500 mg/kg	oral
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	-	M-factor (acute) = 100.0	243.6 mg/kg	oral
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	-	M-factor (acute) = 10.0	500 mg/kg	oral
alcohols, C12-15, ethoxylated	-	-	500 mg/kg	oral
ethylene glycol	-	-	500 mg/kg	oral

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Call a physician immediately. Causes poorly healing wounds.

#### Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a doctor.

#### Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

#### Notes for the doctor

None.

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

These information are not available.

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

None.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

#### Hazardous combustion products

nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.  
Co-ordinate firefighting measures to the fire surroundings.  
Do not allow firefighting water to enter drains or water courses.  
Collect contaminated firefighting water separately.  
Fight fire with normal precautions from a reasonable distance.

### Special protective equipment for firefighters

self-contained breathing apparatus (EN 133)

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Remove persons to safety.  
Ventilate affected area.  
Avoid contact with skin and eyes.  
Do not breathe vapour/spray.  
Special danger of slipping by leaking/spilling product.  
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

#### For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.  
Retain contaminated washing water and dispose of it.  
If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to clean up a spill

Collect spillage.  
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

#### Appropriate containment techniques

Use of adsorbent materials.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.  
Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5.  
Personal protective equipment: see section 8.  
Incompatible materials: see section 10.  
Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.  
Keep away from sources of ignition - No smoking.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.  
Wash hands after use.  
Preventive skin protection (barrier creams/ointments) is recommended.  
Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Flammability hazards

None.

#### Incompatible substances or mixtures

Incompatible materials: see section 10.

#### Protect against external exposure, such as

high temperatures, frost

#### Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

#### Ventilation requirements

Provision of sufficient ventilation.

#### Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Notation	Source
EU	ethylene glycol	107-21-1	IOELV	20	52	40	104	-	2000/39/EC
EU	2-(2-butoxyethoxy)ethanol	112-34-5	IOELV	10	67.5	15	101.2	-	2006/15/EC



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<b>Occupational exposure limit values (Workplace Exposure Limits)</b>									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Notation	Source
GB	ethane-1,2-diol	107-21-1	WEL	-	10	-	-	particle	EH40/2005
GB	ethane-1,2-diol	107-21-1	WEL	20	52	40	104	vap	EH40/2005
GB	2-(2-butoxyethoxy)ethanol	112-34-5	WEL	10	67.5	15	101.2	-	EH40/2005
GB	propan-2-ol	67-63-0	WEL	400	999	500	1,250	-	EH40/2005

### Notation

particle as airborne particles

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

vap as vapours

<b>Relevant DNELs of components of the mixture</b>						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
propan-2-ol	67-63-0	DNEL	500 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
propan-2-ol	67-63-0	DNEL	888 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	67.5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	DNEL	0.789 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	DNEL	8.96 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
alcohols, C12-15, ethoxylated	68131-39-5	DNEL	294 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
alcohols, C12-15, ethoxylated	68131-39-5	DNEL	2,080 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
ethylene glycol	107-21-1	DNEL	35 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
ethylene glycol	107-21-1	DNEL	106 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

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Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
propan-2-ol	67-63-0	PNEC	140.9 mg/l	water
propan-2-ol	67-63-0	PNEC	140.9 mg/l	marine water
propan-2-ol	67-63-0	PNEC	2,251 mg/l	sewage treatment plant (STP)
propan-2-ol	67-63-0	PNEC	552 mg/kg	freshwater sediment
propan-2-ol	67-63-0	PNEC	552 mg/kg	marine sediment
propan-2-ol	67-63-0	PNEC	140.9 mg/l	freshwater
propan-2-ol	67-63-0	PNEC	28 mg/kg	soil
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	1.1 mg/l	freshwater
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.11 mg/l	marine water
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4.4 mg/kg	freshwater sediment
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.44 mg/kg	marine sediment
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.32 mg/kg	soil
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	PNEC	0.001 mg/l	freshwater
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	PNEC	0 mg/l	marine water
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	PNEC	0.18 mg/l	sewage treatment plant (STP)
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	PNEC	3.2 mg/kg	freshwater sediment
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	PNEC	0.13 mg/kg	marine sediment
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	PNEC	45.34 mg/kg	soil
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	-	PNEC	0.4 µg/l	freshwater

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<b>Relevant PNECs of components of the mixture</b>				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydro-pyrimidin-2(1H)-imine acetate salt	-	PNEC	0.04 µg/l	marine water
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydro-pyrimidin-2(1H)-imine acetate salt	-	PNEC	1 mg/l	sewage treatment plant (STP)
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydro-pyrimidin-2(1H)-imine acetate salt	-	PNEC	10 mg/kg	freshwater sediment
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydro-pyrimidin-2(1H)-imine acetate salt	-	PNEC	1 mg/kg	marine sediment

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<b>Relevant PNECs of components of the mixture</b>				
<b>Name of substance</b>	<b>CAS No</b>	<b>Endpoint</b>	<b>Threshold level</b>	<b>Environmental compartment</b>
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydro-pyrimidin-2(1H)-imine acetate salt	-	PNEC	3.7 mg/kg	soil
alcohols, C12-15, ethoxylated	68131-39-5	PNEC	0.051 mg/l	freshwater
alcohols, C12-15, ethoxylated	68131-39-5	PNEC	10 g/l	sewage treatment plant (STP)
alcohols, C12-15, ethoxylated	68131-39-5	PNEC	81.64 mg/kg	freshwater sediment
alcohols, C12-15, ethoxylated	68131-39-5	PNEC	8.16 mg/kg	marine sediment
alcohols, C12-15, ethoxylated	68131-39-5	PNEC	1 mg/kg	soil
alcohols, C12-15, ethoxylated	68131-39-5	PNEC	0.005 mg/l	marine water
ethylene glycol	107-21-1	PNEC	10 mg/l	freshwater
ethylene glycol	107-21-1	PNEC	1 mg/l	marine water
ethylene glycol	107-21-1	PNEC	199.5 mg/l	sewage treatment plant (STP)
ethylene glycol	107-21-1	PNEC	37 mg/kg	freshwater sediment
ethylene glycol	107-21-1	PNEC	3.7 mg/kg	marine sediment
ethylene glycol	107-21-1	PNEC	1.53 mg/kg	soil
propan-2-ol: PNEC Oral - Predators - Secondary poisoning - 160 mg/kg				
2-(2-butoxyethoxy)ethanol: PNEC Oral - Predators - Secondary poisoning - 56 mg/kg				

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

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## Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
NBR: acrylonitrile-butadiene rubber	≥ 0,11 mm	>10 minutes (permeation: level 1)
NR: natural rubber, latex	≥ 0,11 mm	>10 minutes (permeation: level 1)
PVC: polyvinyl chloride	≥ 0,11 mm	>10 minutes (permeation: level 1)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

## Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

## Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	liquid
<b>Colour</b>	clear - bluish
<b>Odour</b>	characteristic
<b>Melting point/freezing point</b>	not determined
<b>Boiling point or initial boiling point and boiling range</b>	>80 °C
<b>Flammability</b>	this material is combustible, but will not ignite readily
<b>Lower and upper explosion limit</b>	0.77 vol% - 13.4 vol%
<b>Flash point</b>	>60 °C
<b>Auto-ignition temperature</b>	210 °C
<b>Decomposition temperature</b>	not relevant
<b>pH (value)</b>	7.2 – 8 (20 °C)
<b>Kinematic viscosity</b>	not determined
<b>Dynamic viscosity</b>	not determined

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## Solubility(ies)

Water solubility miscible in any proportion

**Partition coefficient n-octanol/water (log value)** not determined

**Vapour pressure** not determined

## Density and/or relative density

Density 0.99 – 0.999 g/cm<sup>3</sup> at 20 °C

Relative vapour density information on this property is not available

**Particle characteristics** not relevant  
(liquid)

## 9.2 Other information

**Information with regard to physical hazard classes** hazard classes acc. to GHS (physical hazards):  
not relevant

### Other safety characteristics

Temperature class (EU, acc. to ATEX) T3  
(maximum permissible surface temperature on the equipment: 200°C)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

acids, oxidisers

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

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## SECTION 11: Toxicological information

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

#### Classification procedure

If not otherwise specified the classification is based on:  
Ingredients of the mixture (additivity formula).

#### Classification according to GHS (1272/2008/EC, CLP)

#### Acute toxicity

Test data are not available for the complete mixture.

Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
propan-2-ol	67-63-0	oral	LD50	5,840 mg/kg	rat	OECD Guideline 401	ECHA
propan-2-ol	67-63-0	dermal	LD50	13,100 mg/kg	rabbit	OECD Guideline 402	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	oral	LD50	2,410 mg/kg	mouse, male	OECD Guideline 401	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	dermal	LD50	2,764 mg/kg	rabbit, male	OECD Guideline 402	ECHA
1-Heptanol, 2-propyl-, 7EO	160875-66-1	oral	LD50	300 – 2,000 mg/kg	rat	-	manufacturer
1-Heptanol, 2-propyl-, 7EO	160875-66-1	dermal	LD50	>2,000 mg/kg	rabbit	-	manufacturer
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	oral	LD50	243.6 mg/kg	rat, female	OECD Guideline 401	ECHA
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	dermal	LD0	600 mg/kg	rat	-	-

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Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	-	oral	LD50	500 – 2,000 mg/kg	rat	OECD Guideline 401	ECHA
alcohols, C12-15, ethoxylated	68131-39-5	dermal	LD50	>2,000 mg/kg	rabbit	OECD Guideline 402	manufacturer
ethylene glycol	107-21-1	dermal	LD50	>3,500 mg/kg	mouse	-	ECHA

### Skin corrosion/irritation

Causes severe burns.

### Serious eye damage/eye irritation

Causes serious eye damage.

### Respiratory or skin sensitisation

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### Specific target organ toxicity - single exposure

Based on available data, the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

Based on available data, the classification criteria are not met.



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## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Information on other hazards

There is no additional information.

## Endocrine disrupting properties

None of the ingredients are listed.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Very toxic to aquatic organisms.

Test data are not available for the complete mixture.

#### Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Exposure time	Species	Method	Source
propan-2-ol	67-63-0	LC50	9,640 mg/l	96 h	fathead minnow (Pimephales promelas)	OECD Guideline 203	ECHA
propan-2-ol	67-63-0	LC50	>10,000 mg/l	24 h	daphnia magna	OECD Guideline 202	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	LC50	1,300 mg/l	96 h	bluegill (Lepomis macrochirus)	OECD Guideline 203	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	EC50	>100 mg/l	48 h	daphnia magna	EU method C.2	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	ErC50	1,101 mg/l	72 h	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	EbC50	>100 mg/l	96 h	algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA
1-Heptanol, 2-propyl-, 7EO	160875-66-1	EC50	>10 – 100 mg/l	48 h	daphnia magna	-	manufacturer
1-Heptanol, 2-propyl-, 7EO	160875-66-1	EC50	>10 – 100 mg/l	72 h	algae (Scenedesmus subspicatus)	-	manufacturer

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Name of substance	CAS No	Endpoint	Value	Exposure time	Species	Method	Source
1-Heptanol, 2-propyl-, 7EO	160875-66-1	LC50	>10 – 100 mg/l	96 h	rainbow trout (Oncorhynchus mykiss)	-	manufacturer
N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate	94667-33-1	LC50	0.52 mg/l	96 h	bluegill (Lepomis macrochirus)	EPA OPPTS 850.1075	ECHA
N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate	94667-33-1	LC50	0.62 mg/l	96 h	carp (cyprinus carpio)	OECD Guideline 203	ECHA
N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate	94667-33-1	EC50	0.1 mg/l	48 h	daphnia magna	OECD Guideline 202	ECHA
N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate	94667-33-1	ErC50	0.34 mg/l	72 h	algae (Scenedesmus subspicatus)	OECD Guideline 201	ECHA
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	LC50	0.431 mg/l	96 h	zebra fish (Danio rerio)	OECD Guideline 203	ECHA
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt		LC50	0.707 mg/l	96 h	zebra fish (Danio rerio)	OECD Guideline 203	ECHA

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Name of substance	CAS No	Endpoint	Value	Exposure time	Species	Method	Source
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt		EC50	58.3 µg/l	48 h	daphnia magna	OECD Guideline 202	ECHA
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt		ErC50	19.7 µg/l	72 h	algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA
alcohols, C12-15, ethoxylated	68131-39-5	LC50	>1 mg/l	96 h	rainbow trout (Oncorhynchus mykiss)	-	manufacturer
alcohols, C12-15, ethoxylated	68131-39-5	EC50	>1 mg/l	48 h	daphnia magna	-	manufacturer
alcohols, C12-15, ethoxylated	68131-39-5	EC50	>1 mg/l	72 h	algae (pseudokirchneriella subcapitata)	-	manufacturer

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Name of substance	CAS No	Endpoint	Value	Exposure time	Species	Method	Source
ethylene glycol	107-21-1	LC50	>72,860 mg/l	96 h	fathead minnow (Pimephales promelas)	-	ECHA
ethylene glycol	107-21-1	EC50	>100 mg/l	48 h	daphnia magna	OECD Guideline 202	ECHA
ethylene glycol	107-21-1	ErC50	6,500 - 13,000 mg/l	96 h	algae (pseudokirchneriella subcapitata)	-	ECHA
ethylene glycol	107-21-1	IC 50	10,940 mg/l	96 h	algae (pseudokirchneriella subcapitata)	-	ECHA

### Aquatic toxicity (chronic)

Very toxic to aquatic life with long lasting effects.

Test data are not available for the complete mixture.

### Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Exposure time	Species	Method	Source
2-(2-butoxyethoxy)ethanol	112-34-5	NOEC	$\geq 100$ mg/l	96 h	algae (Desmodesmus subspicatus)	OECD Guideline 201	ECHA
2-(2-butoxyethoxy)ethanol	112-34-5	growth (Eb-Cx) 10%	>1,995 mg/l	30 min	Bacteria (activated sludge)	OECD Guideline 209	ECHA

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Name of substance	CAS No	Endpoint	Value	Exposure time	Species	Method	Source
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	-	NOEC	0.125 mg/l	9 d	zebra fish (Danio rerio)	OECD Guideline 212	ECHA
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	-	NOEC	25 µg/l	21 d	daphnia magna	OECD Guideline 211	ECHA
ethylene glycol	107-21-1	LC50	>1,500 mg/l	28 d	fish	-	ECHA
ethylene glycol	107-21-1	EC50	>15,000 mg/l	21 d	aquatic invertebrates	-	ECHA
ethylene glycol	107-21-1	NOEC	>100 mg/l	72 h	algae	-	ECHA
ethylene glycol	107-21-1	NOEC	≥1,000 mg/l	23 d	aquatic invertebrates	-	ECHA
ethylene glycol	107-21-1	growth (Eb-Cx) 20%	>1,995 mg/l	30 min	activated sludge, domestic	DIN EN ISO 8192	ECHA

## 12.2 Persistence and degradability

### Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
propan-2-ol	67-63-0	oxygen depletion	53 %	5 d	EU method C.5	ECHA
2-(2-but-oxyethoxy)ethanol	112-34-5	oxygen depletion	85 %	28 d	OECD Guideline 301 C	ECHA
1-Heptanol, 2-propyl-, 7EO	160875-66-1	oxygen depletion	>60 %	28 d	OECD Guideline 301D	manufacturer
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	oxygen depletion	68 %	28 d	OECD Guideline 306	ECHA
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt		carbon dioxide generation	20 %	6 d	-	ECHA
ethylene glycol	107-21-1	DOC removal	90 – 100 %	10 d	OECD Guideline 301 A	ECHA

### Biodegradation

The relevant substances of the mixture are readily biodegradable.

### Persistence

No data available.

## 12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

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## Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
2-(2-butoxyethoxy)ethanol	112-34-5	-	1 (pH value: 7, 20 °C)
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9	3.16	4.46 (20 °C)
Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt	-	-	3.6 (pH value: 6.3, 20 °C)
alcohols, C12-15, ethoxylated	68131-39-5	12.7	2.03 – 6.24
ethylene glycol	107-21-1	-	-1.36

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

None of the ingredients are listed.

### 12.7 Other adverse effects

Data are not available.

### Remarks

Wassergefährdungsklasse, WGK (water hazard class): 3

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Completely emptied packages can be recycled.  
Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions.

# Biguaton Spezial

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADR/RID/ADN	UN1903
IMDG-Code	UN1903
ICAO-TI	UN1903

### 14.2 UN proper shipping name

ADR/RID/ADN	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
IMDG-Code	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
ICAO-TI	Disinfectant, liquid, corrosive, n.o.s.
Technical name (hazardous ingredients)	Dialkylmethoxyethyl ammonium propionate

### 14.3 Transport hazard class(es)

ADR/RID/ADN	8
IMDG-Code	8
ICAO-TI	8

### 14.4 Packing group

ADR/RID/ADN	II
IMDG-Code	II
ICAO-TI	II

### 14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment)	Dialkylmethoxyethyl ammonium propionate
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### 14.6 Special precautions for user

-

### 14.7 Maritime transport in bulk according to IMO instruments

-

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) Additional information

Particulars in the transport document	UN1903, DISINFECTANT, LIQUID, CORROSIVE, N.O.S., (contains: Dialkylmethoxyethyl ammonium propionate), 8, II, (E), environmentally hazardous
Classification code	C9
Danger label(s)	8, fish and tree



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Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2X

## International Maritime Dangerous Goods Code (IMDG) Additional information

Marine pollutant	yes (hazardous to the aquatic environment) (Dialkylmethoxyethyl ammonium propionate)
Danger label(s)	8, fish and tree



Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B
Stowage category	B

## International Civil Aviation Organization (ICAO-IATA/DGR) Additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	8



Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

# Biguaton Spezial

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

#### Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	CAS No	Restriction
Biguaton Spezial	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
2-(2-butoxyethoxy)ethanol	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5	R55
propan-2-ol	flammable / pyrophoric	-	R40

#### Legend

- R3
1. Shall not be used in:
    - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
    - tricks and jokes,
    - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
  2. Articles not complying with paragraph 1 shall not be placed on the market.
  3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
    - can be used as fuel in decorative oil lamps for supply to the general public, and
    - present an aspiration hazard and are labelled with H304.
  4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
  5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
    - (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
    - (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage';
    - (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;

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## Legend

- R40**
1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
    - metallic glitter intended mainly for decoration,
    - artificial snow and frost,
    - 'whoopee' cushions,
    - silly string aerosols,
    - imitation excrement,
    - horns for parties,
    - decorative flakes and foams,
    - artificial cobwebs,
    - stink bombs.
  2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: 'For professional users only'.
  3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
  4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
- R55**
1. Shall not be placed on the market for the first time after 27 June 2010, for supply to the general public, as a constituent of spray paints or spray cleaners in aerosol dispensers in concentrations equal to or greater than 3 % by weight.
  2. Spray paints and spray cleaners in aerosol dispensers containing DEGBE and not conforming to paragraph 1 shall not be placed on the market for supply to the general public after 27 December 2010.
  3. Without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that paints other than spray paints containing DEGBE in concentrations equal to or greater than 3 % by weight of that are placed on the market for supply to the general public are visibly, legibly and indelibly marked by 27 December 2010 as follows: 'Do not use in paint spraying equipment'.

## List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

## Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100                      200	56)

### Notation

56) hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

## Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013

None of the ingredients are listed.

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## Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

## Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

## Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.  
Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)
2.2	Hazardous ingredients for labelling: 2-propylheptanol ethoxylate N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate	Hazardous ingredients for labelling: 1-Heptanol, 2-propyl-, 7EO N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine Reaction mass of 1-(3-((C12-18-(even numbered))-alkyl-amino)propyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-1-(3-guanidinopropyl)guanidine acetate salt and 1-(C12-18-(even numbered))-alkyl-tetrahydropyrimidin-2(1H)-imine acetate salt N,N-Didecyl-N-methyl-poly(oxyethyl) ammonium propionate
3.2	-	Hazardous ingredients: change in the listing (table)
8.1	-	Relevant DNELs of components of the mixture: change in the listing (table)
8.1	-	Relevant PNECs of components of the mixture: change in the listing (table)
14.8	Marine pollutant: yes (hazardous to the aquatic environment)	Marine pollutant: yes (hazardous to the aquatic environment) (Dialkylmethoxyethyl ammonium propionate)

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
2006/15/EC	Commission Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
Acute Tox.	Acute toxicity

## Biguaton Spezial

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	European Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

## Biguaton Spezial

Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

# Biguaton Spezial

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.  
Regulation (EC) No. 1907/2006 (REACH).

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

## List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

## Responsible for the safety data sheet

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## Disclaimer

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This SDS has been compiled and is solely intended for this product.