

**mucocit® T**    **No Change Service!**

Version 02.00

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name : mucocit® T

**1.2 Relevant identified uses of the substance or mixture and uses advised against**Use of the Sub-  
stance/Mixture : Disinfectants  
Recommended restrictions  
on use : Restricted to professional users.**1.3 Details of the supplier of the safety data sheet**Producer/Supplier : Schülke & Mayr GmbH  
Robert-Koch-Str. 2  
22851 Norderstedt  
Germany  
Telephone: +4940521000  
Telefax: +494052100318  
mail@schuelke.com  
www.schuelke.comContact person : Application Department HI  
+49 (0)40/ 521 00 544  
pab@schuelke.com  
(Schülke & Mayr UK Ltd.: +44-1142543500)**1.4 Emergency telephone number**Emergency telephone num-  
ber : UK Poisons Emergency number: 0870 600 6266  
Emergency telephone num-  
ber : +49 (0)40 / 52 100 -0**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (67/548/EEC, 1999/45/EC)**Corrosive R34: Causes burns.  
Harmful R42/43: May cause sensitisation by inhalation and  
skin contact.  
Dangerous for the environment R50/53: Very toxic to aquatic organisms, may  
cause long-term adverse effects in the aquatic  
environment.**2.2 Label elements****Labelling according to EC Directives (1999/45/EC):**

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Hazard symbols



Corrosive

Dangerous  
for the envi-  
ronment

R-phrases)

: R34  
R42/43  
  
R50/53Causes burns.  
May cause sensitisation by inhalation and  
skin contact.  
Very toxic to aquatic organisms, may cause  
long-term adverse effects in the aquatic en-  
vironment.

S-phrases)

: S23  
S26  
  
S36/37/39  
  
S45  
  
S61Do not breathe gas/fumes/vapour/spray.  
In case of contact with eyes, rinse immedi-  
ately with plenty of water and seek medical  
advice.  
Wear suitable protective clothing, gloves  
and eye/face protection.  
In case of accident or if you feel unwell,  
seek medical advice immediately (show the  
label where possible).  
Avoid release to the environment. Refer to  
special instructions/ Safety data sheets.

Further information

: In the EU, this product falls under the Directive medical devices  
93/42/EEC.

Hazardous components which must be listed on the label:

2372-82-9	N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine
90640-43-0	N-dodecylpropane-1,3-diamine
110-85-0	Piperazin

Special labelling of certain  
mixtures: Labelling according to Regulation (EC) No. 648/2004: (5 - 15  
% NTA (nitrilotriacetic acid) and salts thereof,, 5 - 15 % non-  
ionic surfactants, perfumes) Limonene

### 2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Solution of the following substances with harmless additives.

#### Hazardous components

Chemical Name	Index-Number CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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Poly(oxy-1,2-ethandiyloxy).alpha.-tridecyl-omega-hydroxy-, branched	68439-50-9 500-213-3	Xn; R22-R41	Acute Tox. 4; H302 Eye Dam. 1; H318	<= 10 %
Didecyldimethylammonium chloride	612-131-00-6 7173-51-5 230-525-2	Xn; R22 C; R34 N; R50	Acute Tox. 3; H301 Skin Corr. 1B; H314 Aquatic Acute 1; H400 M-Factor 10	<= 10 %
Tetrasodium EDTA	607-428-00-2 64-02-8 200-573-9 01- 2119486762- 27-XXXX	Xn; R20/22 Xi; R41	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Dam. 1; H318	<= 6 %
Propan-2-ol	603-117-00-0 67-63-0 200-661-7 01- 2119457558- 25-XXXX	F; R11 Xi; R36 R67	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	<= 6 %
Limonene	601-029-00-7 138-86-3 205-341-0	R10 Xi; R38 Xi; R43 N; R50/53	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	<= 5 %
Cocosalkylpropylen-diaminbiguanidinium-diacetat	85681-60-3 288-198-7	Xn; R22 C; R34 N; R50	Acute Tox. 4; H312 Skin Corr. 1B; H314 Aquatic Acute 1; H400	<= 5 %
N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine	2372-82-9 219-145-8	Xn; R22 Xn; R48/22 C; R35 N; R50	Acute Tox. 3; H301 Skin Corr. 1A; H314 STOT RE 2; H373 Aquatic Acute 1; H400 M-Factor 10	<= 5 %
N-dodecylpropane-1,3-diamine	90640-43-0 292-562-0	T; R25 C; R35 N; R50	Acute Tox. 3; H301 Skin Corr. 1B; H314 STOT RE 1; H372 Aquatic Acute 1; H410	<= 5 %
Piperazin	612-057-00-4 110-85-0 203-808-3	C; R34 Xn; R42/43 R52/53	Skin Corr. 1B; H314 Resp. Sens. 1; H334	<= 5 %

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			Skin Sens. 1; H317	
Tributylphosphat	015-014-00-2 126-73-8 204-800-2	Xn; R22 Xi; R38 Xn; Carc.Cat.3- R40	Acute Tox. 4; H302 Skin Irrit. 2; H315 Carc. 2; H351	<= 1 %

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- General advice : Take off all contaminated clothing immediately.
- If inhaled : Move to fresh air.  
No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.  
Call a physician immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Call a physician immediately.
- In case of eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Call a physician immediately.
- If swallowed : Do NOT induce vomiting.  
Rinse mouth with water.  
Give small amounts of water to drink.  
Obtain medical attention.

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

- Symptoms : Treat symptomatically.

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

- Treatment : For specialist advice physicians should contact the Poisons Information Service.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media : Dry powder, Foam, Carbon dioxide (CO<sub>2</sub>), Water spray jet
- Unsuitable extinguishing media : High volume water jet

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

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Specific hazards during fire-fighting : Heating or fire can release toxic gas.

Specific risk from the substance or the product itself, its combustion products or evolved gases : Fire may cause evolution of: Carbon oxides, Nitrogen oxides (NOx), Oxides of phosphorus, chlorine compounds

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Increased risk of slipping in the presence of leaked / spilled product. Use personal protective equipment.

**6.2 Environmental precautions**

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece). Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

**6.4 Reference to other sections**

See chapter 8 + 13

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : Avoid contact with skin and eyes. Ensure adequate ventilation. Do not breathe vapour.

Advice on protection against fire and explosion : No special protective measures against fire required.

Hygiene measures : Keep away from food and drink. Take off all contaminated clothing immediately.

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

Requirements for storage areas and containers : Store at room temperature in the original container.

Further information on storage conditions : Keep away from direct sunlight. Keep away from heat. Keep container tightly closed.

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Advice on common storage    : Keep away from food and drink.

**7.3 Specific end use(s)**

Specific use(s)    : none

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Propan-2-ol	67-63-0	Permissible exposure limit	200 ppm 500 mg/m <sup>3</sup>	TRGS 900
Propan-2-ol	67-63-0	Ceiling Limit Value	400 ppm 1.000 mg/m <sup>3</sup>	TRGS 900
Propan-2-ol	67-63-0	Permissible exposure limit	400 ppm 980 mg/m <sup>3</sup>	OSHA
Tributylphosphat	126-73-8	Permissible exposure limit	1 ppm 11 mg/m <sup>3</sup>	TRGS 900
Tributylphosphat	126-73-8	Ceiling Limit Value	2 ppm 22 mg/m <sup>3</sup>	TRGS 900
Tributylphosphat	126-73-8	Permissible exposure limit	5 mg/m <sup>3</sup>	OSHA
Piperazin	110-85-0	Permissible exposure limit	0,1 mg/m <sup>3</sup>	TRGS 900
Piperazin	110-85-0	Ceiling Limit Value	0,1 mg/m <sup>3</sup>	TRGS 900

**Derived No Effect Level (DNEL)**Propan-2-ol    : End Use: Workers, Exposure routes: Skin contact, Potential health effects: Chronic effects, Value: 888 mg/m<sup>3</sup>End Use: Workers, Exposure routes: Inhalation, Potential health effects: Chronic effects, Value: 500 mg/m<sup>3</sup>**Predicted No Effect Concentration (PNEC)**

Propan-2-ol    : Fresh water, Value: 140,9 mg/l

Marine water, Value: 140,9 mg/l

Fresh water sediment, Value: 552 mg/kg

Marine sediment, Value: 552 mg/kg

Soil, Value: 28 mg/kg

**8.2 Exposure controls****Engineering measures**

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Ensure that eyewash stations and safety showers are close to the workstation location.  
Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

- Eye protection : Tightly fitting safety goggles
- Hand protection : Splash protection: disposable nitrile rubber gloves e.g. Dermatril (layer thickness: 0,11 mm) made by KCL or gloves from other manufacturers offering the same protection. Prolonged contact: Nitrile rubber gloves e.g. Camatril (>480 Min., layer thickness: 0,40 mm) or butyl rubber gloves e.g. Butoject (>480 Min., layer thickness: 0,70 mm) made by KCL or gloves from other manufacturers offering the same protection.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Protective measures : Avoid contact with skin and eyes.

**Environmental exposure controls**

- General advice : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

- Appearance : liquid
- Colour : blue
- Odour : pleasant
- Flash point : no data available
- Ignition temperature : Propan-2-ol: 425 °C
- Auto-ignition temperature : not applicable
- Lower explosion limit : Propan-2-ol: 2 %(V)
- Upper explosion limit : Propan-2-ol: 12 %(V)
- Flammability : no data available
- Explosive properties : Not explosive
- Oxidizing properties : not applicable
- Melting point/freezing point : no data available
- Decomposition temperature : no data available
- Boiling point/boiling range : 100 °C
- Vapour pressure : not applicable
- Relative vapour density : no data available
- Density : ca. 1,03 g/cm<sup>3</sup>, 20 °C
- Water solubility : in all proportions, 20 °C
- Viscosity, dynamic : no data available
- Evaporation rate : no data available

**9.2 Other information**

no data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability**

The product is chemically stable.

**10.3 Possibility of hazardous reactions**

None reasonably foreseeable.

**10.4 Conditions to avoid**

Protect from frost, heat and sunlight.

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

No decomposition if stored and applied as directed.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-.omega.-hydroxy-,branched:**

Acute oral toxicity : LD50 Oral: 500 - 2000 mg/kg, rat, OECD Test Guideline 423

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

**Didecyldimethyl-ammonium chloride:**

Acute oral toxicity : LD50: 238 mg/kg, rat, OECD Test Guideline 401

Acute inhalation toxicity : no data available

Acute dermal toxicity : LD50: 3342 mg/kg, rabbit

**Tetrasodium EDTA:**

Acute oral toxicity : LD50: 1780 - 2000 mg/kg, rat

Acute inhalation toxicity : LC50: 1000 - 5000 mg/l, 6 h, rat, OECD Test Guideline 403,  
The toxicological data has been taken from products of similar composition.

Acute dermal toxicity : no data available

**Propan-2-ol:**

Acute oral toxicity : LD50: > 5000 mg/kg, rat

Acute inhalation toxicity : LC50: 39 mg/l, 4 h, rat

Acute dermal toxicity : LD50: > 5000 mg/kg, rabbit

**Limonene:**

Acute oral toxicity : LD50: 4400 mg/kg, rat

Acute inhalation toxicity : no data available

Acute dermal toxicity : LD50: > 5000 mg/kg, rabbit

**Cocosalkylpropylen-diaminbiguanidinium-diacetat:**

Acute oral toxicity : LD50: 500 - 2000 mg/kg, rat

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine:**

Acute oral toxicity : LD50 Oral: 261 mg/kg, rat, OECD Test Guideline 401, Toxic if



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	swallowed.
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available
<b>N-dodecylpropane-1,3-diamine:</b>	
Acute oral toxicity	: LD50: 200 mg/kg, rat, OECD Test Guideline 423
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available
<b>Piperazin:</b>	
Acute oral toxicity	: LD50: 2600 mg/kg, rat, calculated
Acute inhalation toxicity	: not applicable
Acute dermal toxicity	: LD50: 4000 mg/kg, rabbit, literature value
<b>Tributylphosphat:</b>	
Acute oral toxicity	: LD50: 1390 mg/kg, rat, Harmful if swallowed.
Acute inhalation toxicity	: LC50: 4242 mg/l, 4 h, rat
Acute dermal toxicity	: LD50: > 3100 mg/kg, rabbit

**Skin corrosion/irritation****Product**

Causes burns.

**Serious eye damage/eye irritation****Product**

Causes burns.

**Respiratory or skin sensitisation****Product**

May cause sensitisation by inhalation and skin contact.

**Germ cell mutagenicity****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-omega.-hydroxy-,branched:**

Genotoxicity in vitro : no data available

Germ cell mutagenicity- Assessment : no data available

**Didecyldimethyl-ammonium chloride:**

Genotoxicity in vitro : Not mutagenic in Ames Test.

Genotoxicity in vivo : negative , Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) , rat

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

**Tetrasodium EDTA:**

Genotoxicity in vitro : In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Did not show mutagenic effects in animal experiments.

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

**Propan-2-ol:**

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

**Limonene:**

Germ cell mutagenicity- Assessment : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat:**

Germ cell mutagenicity- Assessment : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine:**

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Genotoxicity in vitro : Not mutagenic in Ames Test. OECD Test Guideline 471  
 Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test.

**N-dodecylpropane-1,3-diamine:**

Genotoxicity in vitro : Not mutagenic in Ames Test.  
 Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test.

**Piperazin:**

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

**Tributylphosphat:**

Genotoxicity in vitro : Not mutagenic in Ames Test.  
 Genotoxicity in vivo : In vivo tests did not show any chromosomal changes.  
 Germ cell mutagenicity- Assessment : Not mutagenic in Ames Test.

**Carcinogenicity****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl.-omega.-hydroxy-,branched:**

Carcinogenicity - Assessment : no data available

**Didecyldimethyl-ammonium chloride:**

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

**Tetrasodium EDTA:**

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

**Propan-2-ol:**

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

**Limonene:**

Carcinogenicity - Assessment : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat:**

Carcinogenicity - Assessment : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine:**

Carcinogenicity - Assessment : no data available

**N-dodecylpropane-1,3-diamine:**

Carcinogenicity - Assessment : no data available

**Piperazin:**

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.

**Tributylphosphat:**

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments, Limited evidence of a carcinogenic effect.

**Reproductive toxicity****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl.-omega.-hydroxy-,branched:**

Reproductive toxicity - Assessment : no data available

**Didecyldimethyl-ammonium chloride:**

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Reproductive toxicity - Assessment : no data available

**Tetrasodium EDTA:**

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

**Propan-2-ol:**

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

**Limonene:**

Reproductive toxicity - Assessment : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat:**

Reproductive toxicity - Assessment : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine:**

Reproductive toxicity - Assessment : No toxicity to reproduction

**N-dodecylpropane-1,3-diamine:**

Reproductive toxicity - Assessment : According to experience not expected

**Piperazin:**

Reproductive toxicity - Assessment : Suspected of damaging fertility or the unborn child.

**Tributylphosphat:**

Reproductive toxicity - Assessment : no data available

**Teratogenicity****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-.omega.-hydroxy-,branched:**

Teratogenicity - Assessment : no data available

**Didecyldimethyl-ammonium chloride:**

Teratogenicity - Assessment : no data available

**Tetrasodium EDTA:**

Teratogenicity - Assessment : Animal testing did not show any effects on foetal development.

**Propan-2-ol:**

Teratogenicity - Assessment : Ingestion of excessive amounts by pregnant animals resulted in maternal and foetal toxicity.

**Limonene:**

Teratogenicity - Assessment : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat:**

Teratogenicity - Assessment : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine:**

Teratogenicity - Assessment : Did not show teratogenic effects in animal experiments.

**N-dodecylpropane-1,3-diamine:**

Teratogenicity - Assessment : Did not show mutagenic or teratogenic effects in animal experiments.

**Piperazin:**

Teratogenicity - Assessment : Animal experiments showed mutagenic and teratogenic effects.

**Tributylphosphat:**

Teratogenicity - Assessment : no data available

**STOT - single exposure**

no data available

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**STOT - repeated exposure**

no data available

**Repeated dose toxicity****Components:****N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine:**

rat: NOAEL: 9 mg/kg , Oral , Exposure time: 90-days

**N-dodecylpropane-1,3-diamine:**

rat (male and female): NOAEL: 0,4 mg/l , Ingestion , Method: OECD Test Guideline 408

**Aspiration toxicity**

no data available

**Further information****Product**

No data is available on the product itself. The classification was made according to the calculation procedure of the Preparations Directive.

**SECTION 12: Ecological information****12.1 Toxicity****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-omega.-hydroxy-, branched :**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 1 - 10 mg/l, 96 h

Toxicity to daphnia and other : EC50: 1 - 10 mg/l, 48 h

aquatic invertebrates

Toxicity to algae : EC50: 1 - 10 mg/l, 72 h

Toxicity to bacteria : EC10 (activated sludge): &gt; 10.000 mg/l, 17 h, DIN 38 412 Part 8

**Didecyldimethyl-ammonium chloride :**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0,19 mg/l, 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0,062 mg/l, 48 h

aquatic invertebrates

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,026 mg/l, 96 h

M-Factor : 10

**Tetrasodium EDTA :**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): &gt; 100 mg/l, 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna): &gt; 100 mg/l, 48 h, DIN 38412

aquatic invertebrates

Toxicity to algae : EC50: &gt; 100 mg/l, 72 h, Growth inhibition

**Propan-2-ol :**

Toxicity to fish : LC50 (Leuciscus idus): &gt; 100 mg/l, 48 h, static test, Raw material, literature value

Toxicity to daphnia and other : EC50 (Daphnia magna): &gt; 100 mg/l, 48 h, static test, Raw material, literature value

aquatic invertebrates

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): &gt; 100 mg/l, 72 h, static test, Raw material, literature value

**Limonene :**

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Toxicity to fish : LC50: 569 mg/l, 96 h  
 Toxicity to daphnia and other aquatic invertebrates : EC50: 69,6 mg/l, 48 h  
 Toxicity to algae : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat :**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0,1 - 1 mg/l, 96 h  
 Toxicity to daphnia and other aquatic invertebrates : no data available  
 Toxicity to algae : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine :**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,45 mg/l, 96 h  
 Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 0,073 mg/l, 48 h  
 Toxicity to algae : ErC10 (Desmodesmus subspicatus (green algae)): 0,012 mg/l, 72 h, OECD Test Guideline 201

M-Factor : 10

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0,024 mg/l, 21 d, OECD Test Guideline 211

**N-dodecylpropane-1,3-diamine :**

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 0,148 mg/l, 96 h, OECD Test Guideline 203  
 Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna): 0,032 mg/l, Reproduction Test, OECD Test Guideline 211, 21 -days  
 Toxicity to algae : EC50 (Pseudokirchneriella subcapitata): 0,0652 mg/l, 72 h, OECD Test Guideline 201

**Piperazin :**

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1.800 mg/l, 96 h, literature value  
 Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 21 mg/l, 48 h, OECD Test Guideline 202  
 Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): >100 mg/l, 72 h

**Tributylphosphat :**

Toxicity to fish : LC50 (Oncorhynchus mykiss): 8,2 mg/l, 96 h, literature value  
 Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 3,65 mg/l, 48 h  
 Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 2,8 mg/l, 72 h

**12.2 Persistence and degradability****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-.omega.-hydroxy-,branched :**

Biodegradability : Readily biodegradable.

**Didecyldimethyl-ammonium chloride :**

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

**Tetrasodium EDTA :**

Biodegradability : not rapidly degradable

**Propan-2-ol :**

Biodegradability : Readily biodegradable.

**Limonene :**

Biodegradability : no data available

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**Cocosalkylpropylen-diaminbiguanidinium-diacetat :**

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

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine :**

Biodegradability : rapidly biodegradable, 79 o/o, 28 d, OECD Test Guideline 301D

**N-dodecylpropane-1,3-diamine :**

Biodegradability : biodegradable, OECD Test Guideline 301A

**Piperazin :**

Biodegradability : Not readily biodegradable., OECD Test Guideline 301A

**Tributylphosphat :**

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

**12.3 Bioaccumulative potential****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-omega.-hydroxy-,branched :**

Bioaccumulation : According to experience not expected

**Didecyldimethyl-ammonium chloride :**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish), 46 d, Bio-concentration factor (BCF): 81

**Tetrasodium EDTA :**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish), 28 d, Bio-concentration factor (BCF): 1,8, No bioaccumulation is to be expected (log Pow &lt;= 4).

**Propan-2-ol :**

Bioaccumulation : No bioaccumulation is to be expected (log Pow &lt;= 4).

Partition coefficient: n-octanol/water : log Pow: 0,05 (20 °C), Method: OECD Test Guideline 107

**Limonene :**

Bioaccumulation : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat :**

Bioaccumulation : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine :**

Bioaccumulation : no data available

Partition coefficient: n-octanol/water : log Pow: -0,17

**N-dodecylpropane-1,3-diamine :**

Bioaccumulation : This substance is considered to be very persistent and very bioaccumulating (vPvB).

**Piperazin :**

Bioaccumulation : Species: Cyprinus carpio (Carp), 42 d, Bioconcentration factor (BCF): 0,9, OECD Test Guideline 305C, Does not accumulate in organisms.

**Tributylphosphat :**

Bioaccumulation : Bioconcentration factor (BCF): 6 - 49, Bioaccumulation is unlikely.

**12.4 Mobility in soil****Components:****Poly(oxy-1,2-ethandiyl).alpha.-tridecyl-omega.-hydroxy-,branched :**

Mobility : Adsorbs on soil.

**Didecyldimethyl-ammonium chloride :**

Mobility : Mobile in soils

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**Tetrasodium EDTA :**

Mobility : Slightly mobile in soils

**Propan-2-ol :**

Mobility : Mobile in soils

**Limonene :**

Mobility : no data available

**Cocosalkylpropylen-diaminbiguanidinium-diacetat :**

Mobility : no data available

**N-(3-Aminopropyl)-N-dodecylpropane-1,3-diamine :**

Mobility : After release, adsorbs onto soil.

**N-dodecylpropane-1,3-diamine :**

Mobility : not determined

**Piperazin :**

Mobility : no data available

**Tributylphosphat :**

Mobility : no data available

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

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

**12.6 Other adverse effects****Product**

Additional ecological information : none

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

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

Contaminated packaging : Take empty packaging to the recycling plant.

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

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

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

ADR : 1903

IMDG : 1903

IATA : 1903

**14.2 Proper shipping name**ADR : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.  
(N-dodecylpropane-1,3-diamine, Didecyldimethyl-ammonium chloride)

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**IMDG** : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.  
(N-dodecylpropane-1,3-diamine, Didecyldimethyl-ammonium chloride)

**IATA** : DISINFECTANT, LIQUID, CORROSIVE, N.O.S.  
(N-dodecylpropane-1,3-diamine, Didecyldimethyl-ammonium chloride)

**14.3 Transport hazard class**

**ADR** : 8  
**IMDG** : 8  
**IATA** : 8

**14.4 Packing group**

**ADR**  
Packaging group : III  
Classification Code : C9  
Hazard Identification Number : 80  
Labels : 8 (N)  
Tunnel restriction code : E

**IMDG**  
Packaging group : III  
Labels : 8 (N)  
EmS Number : F-A, S-B

**IATA**  
Packing instruction (cargo aircraft) : 820  
Packaging group : III  
Labels : 8 (N)

**14.5 Environmental hazards**

**ADR**  
Environmentally hazardous : yes

**IMDG**  
Marine pollutant : yes

**IATA**  
Environmentally hazardous : yes

**14.6 Special precautions for user**

For personal protection see section 8.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Exempt

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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



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- Volatile organic compounds : < 5 %, Directive 1999/13/EC on the limitation of emissions of volatile organic compounds
- Other regulations : The surfactant(s) contained in this mixture complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

**15.2 Chemical Safety Assessment**

Exempt

**SECTION 16: Other information****Full text of R-Phrases**

- R10 Flammable.  
R11 Highly flammable.  
R20/22 Harmful by inhalation and if swallowed.  
R22 Harmful if swallowed.  
R25 Toxic if swallowed.  
R34 Causes burns.  
R35 Causes severe burns.  
R36 Irritating to eyes.  
R38 Irritating to skin.  
R40 Limited evidence of a carcinogenic effect.  
R41 Risk of serious damage to eyes.  
R42/43 May cause sensitisation by inhalation and skin contact.  
R43 May cause sensitisation by skin contact.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
R50 Very toxic to aquatic organisms.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R67 Vapours may cause drowsiness and dizziness.

**Full text of H-Statements**

- H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H336 May cause drowsiness or dizziness.

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H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Full text of other abbreviations**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
Resp. Sens.	Respiratory sensitisation
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

**Further information**

Changes compared with the previous edition!!!

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.