

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

Trade name : Sterillium

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

Use of the Substance/Mixture : In-door use  
For further information, refer to the product technical data sheet.

Recommended restrictions on use : Medicinal products, Biocides

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

Manufacturer, importer, supplier : BODE Chemie GmbH  
Melanchthonstraße 27  
22525 Hamburg  
Tel.: +49 (0)40 / 54 00 60

Responsible Department : Scientific Affairs  
KundenService-SiDa@bode-chemie.de

**1.4 Emergency telephone number**

Emergency telephone number : Giftnotruf Göttingen  
24h-Phone +49 (0)551 / 1 92 40

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Flammable liquids , Category 3 H226: Flammable liquid and vapour.  
Eye irritation , Category 2 H319: Causes serious eye irritation.  
Specific target organ toxicity - single exposure , Category 3, Central nervous system H336: May cause drowsiness or dizziness.

**Classification (67/548/EEC, 1999/45/EC)**

Flammable R10: Flammable.  
Irritant R36: Irritating to eyes.  
R67: Vapours may cause drowsiness and dizziness.

**2.2 Label elements****Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :  

Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

Precautionary statements : P102 Keep out of reach of children.  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**Response:**

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

P337 + P313 If eye irritation persists: Get medical advice/attention.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Propan-2-ol (CAS: 67-63-0)

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures****Hazardous components**

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Propan-2-ol	67-63-0 200-661-7 01-2119457558-25	F; R11 Xi; R36 R67	Flam. Liq.2; H225 Eye Irrit.2; H319 STOT SE3; H336	>= 30 - < 50
Propan-1-ol	71-23-8 200-746-9 01-2119486761-29	F; R11 Xi; R41 R67	Flam. Liq.2; H225 Eye Dam.1; H318 STOT SE3; H336	>= 30 - < 50
tetradecanol	112-72-1 204-000-3 01-2119485910-33	Xi; R36	Eye Irrit.2; H319 Aquatic Chronic1; H410	>= 0,25 - < 5
Mecetronium ethyl sulfate	3006-10-8 221-106-5	C; R34 Xn; R22 N; R50/53	Skin Corr.1B; H314 Aquatic Acute1; H400 Aquatic Chronic1; H410 Acute Tox.4; H302	>= 0,1 - < 0,25

For explanation of abbreviations see section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

- General advice : If you feel unwell, seek medical advice (show the label where possible).
- If inhaled : If breathed in, move person into fresh air.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
- If swallowed : Rinse mouth.  
Do NOT induce vomiting.

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

- Symptoms : No information available.

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

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

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

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : none

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

- Specific hazards during fire-fighting : Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : No hazardous combustion products are known

**5.3 Advice for firefighters**

- Special protective equipment for firefighters : Use personal protective equipment.
- Further information : Standard procedure for chemical fires.

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

- Personal precautions : Ensure adequate ventilation.  
Remove all sources of ignition.

**6.2 Environmental precautions**

- Environmental precautions : Should not be released into the environment.

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

- Methods for cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).

**6.4 Reference to other sections**

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

- Advice on safe handling : Keep away from heat.
- Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

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

- Requirements for storage areas and containers : Store at room temperature in the original container.
- Advice on common storage : Keep away from food and drink.

**7.3 Specific end use(s)**

no data available

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

Contains no substances with occupational exposure limit values.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

- Propan-2-ol : End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Chronic effects  
Value: 888 mg/kg  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Chronic effects  
Value: 500 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: Chronic effects  
Value: 319 mg/kg  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: Chronic effects  
Value: 89 mg/m<sup>3</sup>  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: Chronic effects  
Value: 26 mg/kg
- Propan-1-ol : End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: Long-term systemic effects  
Value: 136 mg/kg  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: Long-term systemic effects  
Value: 268 mg/m<sup>3</sup>

End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Short-term exposure  
 Value: 1723 mg/m<sup>3</sup>  
 End Use: Consumers  
 Exposure routes: Skin contact  
 Potential health effects: Long-term systemic effects  
 Value: 81 mg/kg  
 End Use: Consumers  
 Exposure routes: Inhalation  
 Potential health effects: Long-term systemic effects  
 Value: 80 mg/m<sup>3</sup>  
 End Use: Consumers  
 Exposure routes: Inhalation  
 Potential health effects: Short-term exposure  
 Value: 1036 mg/m<sup>3</sup>  
 End Use: Consumers  
 Exposure routes: Ingestion  
 Potential health effects: Long-term systemic effects  
 Value: 61 mg/kg  
 tetradecanol : End Use: Workers  
 Exposure routes: Skin contact  
 Potential health effects: Long-term systemic effects  
 Value: 125 mg/kg  
 End Use: Workers  
 Exposure routes: Inhalation  
 Potential health effects: Long-term systemic effects  
 Value: 220 mg/m<sup>3</sup>  
 End Use: Consumers  
 Exposure routes: Skin contact  
 Potential health effects: Acute effects  
 Value: 75 mg/kg  
 End Use: Consumers  
 Exposure routes: Inhalation  
 Potential health effects: Acute effects  
 Value: 65 mg/m<sup>3</sup>  
 End Use: Consumers  
 Exposure routes: Ingestion  
 Potential health effects: Acute effects  
 Value: 75 mg/kg

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

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

Propan-1-ol : Fresh water  
Value: 10 mg/l

	Soil Value: 2,2 mg/kg
	Marine water Value: 1 mg/l
	Fresh water sediment Value: 22,8 mg/kg
	Marine sediment Value: 2,28 mg/kg
tetradecanol	: Fresh water Value: 0,00032 mg/l
	Marine water Value: 0,000032 mg/l
	Soil Value: 0,28 mg/kg
	Fresh water sediment Value: 0,36 mg/kg
	Marine sediment Value: 0,036 mg/kg

**8.2 Exposure controls****Personal protective equipment**

Protective measures : No special protective equipment required.

**Environmental exposure controls**

General advice : Should not be released into the environment.

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

Appearance	: liquid
Colour	: light blue
Odour	: pleasant
pH	: no data available
Melting point/range	: not determined
Boiling point/boiling range	: 83 °C
Flash point	: 23 °C Method: DIN 51755 Part 1
Lower explosion limit	: lower flammability limit 70 mg/m <sup>3</sup> ( 20 °C)

Method: DIN 51649

Vapour pressure : 6 kPa (50 °C)

Density : 0,85 g/cm<sup>3</sup> (20 °C)

Solubility(ies)

Water solubility : completely miscible

Auto-ignition temperature : 430 °C

**9.2 Other information**

no data available

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

No decomposition if stored and applied as directed.

**10.2 Chemical stability**

The product is chemically stable.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : None reasonably foreseeable.

**10.4 Conditions to avoid**Conditions to avoid : Heat.  
Strong sunlight for prolonged periods.**10.5 Incompatible materials**

Materials to avoid : None.

**10.6 Hazardous decomposition products**

no data available

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Product:****Acute toxicity**

Acute oral toxicity : LD50 Oral rat: 13.300 mg/kg

Acute inhalation toxicity : Acute toxicity estimate : > 20 mg/l  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : LD50 Dermal rabbit: &gt; 8.500 mg/kg

**Skin corrosion/irritation**

Result: No skin irritation

**Serious eye damage/eye irritation**

Species: rabbit  
Result: Eye irritation  
Method: OECD Test Guideline 405  
GLP: yes

**Respiratory or skin sensitisation**

Result: Does not cause skin sensitisation.

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**

no data available

**STOT - single exposure**

no data available

**STOT - repeated exposure**

no data available

**Aspiration toxicity**

no data available

**Components:****Acute toxicity****Propan-2-ol (CAS: 67-63-0):**

Acute oral toxicity : LD50 Oral rat: > 2.000 mg/kg

Acute inhalation toxicity : LC50 rat: > 20 mg/l  
Exposure time: 8 h

Acute dermal toxicity : LD50 Dermal rabbit: > 2.000 mg/kg

**Propan-1-ol (CAS: 71-23-8):**

Acute oral toxicity : LD50 Oral rat: 8.000 mg/kg

Acute inhalation toxicity : LC50 rat: > 33,8 mg/l  
Exposure time: 4 h  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 Dermal rabbit: 4.032 mg/kg  
Method: Calculation method

**tetradecanol (CAS: 112-72-1):**



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Acute oral toxicity : LD50 rat: > 5.000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 rat: 0,375 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 rabbit: > 5.000 mg/kg

**Mecetronium ethyl sulfate (CAS: 3006-10-8):**

Acute oral toxicity : LD50 Oral rat: > 600 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal rabbit: > 2.000 mg/kg  
Method: OECD Test Guideline 402

**Skin corrosion/irritation****Propan-2-ol (CAS: 67-63-0):**

Species: rabbit  
Result: No skin irritation

**Propan-1-ol (CAS: 71-23-8):**

Species: rabbit  
Result: No skin irritation

**tetradecanol (CAS: 112-72-1):**

Result: No skin irritation  
Method: OECD Test Guideline 404

**Mecetronium ethyl sulfate (CAS: 3006-10-8):**

Species: rabbit  
Result: Corrosive  
Method: OECD Test Guideline 404

**Serious eye damage/eye irritation****Propan-2-ol (CAS: 67-63-0):**

Species: rabbit  
Result: Eye irritation

**Propan-1-ol (CAS: 71-23-8):**

Species: rabbit  
Result: Irreversible effects on the eye

**tetradecanol (CAS: 112-72-1):**

Result: Eye irritation  
Method: OECD Test Guideline 405

**Mecetronium ethyl sulfate (CAS: 3006-10-8):**

Species: rabbit  
Result: Risk of serious damage to eyes.  
Method: OECD Test Guideline 405

**Respiratory or skin sensitisation****Propan-2-ol (CAS: 67-63-0):**

Test Method: Buehler Test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

**Propan-1-ol (CAS: 71-23-8):**

Test Method: Maximisation Test

Species: guinea pig

Result: Did not cause sensitisation on laboratory animals.

Method: OECD Test Guideline 406

**tetradecanol (CAS: 112-72-1):**

Result: Did not cause sensitisation on laboratory animals.

Method: OECD Test Guideline 406

**Mecetronium ethyl sulfate (CAS: 3006-10-8):**

Result: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

**Germ cell mutagenicity****Propan-2-ol (CAS: 67-63-0):**

Genotoxicity in vitro

: Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

**Propan-1-ol (CAS: 71-23-8):**

Genotoxicity in vitro

: Type: in vitro assay

Result: negative

**Mecetronium ethyl sulfate (CAS: 3006-10-8):**

Germ cell mutagenicity- Assessment

: Not mutagenic in Ames Test.

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

Toxicity to fish

: LC50 (Leuciscus idus (Golden orfe)): 2.300 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to algae

: EC50 (Desmodesmus subspicatus (green algae)): 22 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 7,8 mg/l

Exposure time: 72 h

Toxicity to bacteria

: IC50 (Bacteria): &gt; 10.000 mg/l

Method: DIN 38 412 Part 8

**Components:****Propan-2-ol (CAS: 67-63-0):**

- Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): > 100 mg/l  
Exposure time: 48 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 100 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (*Scenedesmus capricornutum* (fresh water algae)): > 100 mg/l  
Exposure time: 72 h

**Propan-1-ol (CAS: 71-23-8):**

- Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 4.555 mg/l  
Exposure time: 96 h  
Test Method: flow-through test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 3.644 mg/l  
Exposure time: 48 h  
Method: DIN 38412
- Toxicity to algae : NOEC (*Chlorella vulgaris* (Fresh water algae)): 1.150 mg/l  
Exposure time: 48 h
- Toxicity to bacteria : IC50 (Bacteria): > 1.000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

**tetradecanol (CAS: 112-72-1):**

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Method: ISO 7346/2
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): > 1 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,0016 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

**Mecetronium ethyl sulfate (CAS: 3006-10-8):**

- Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): 0,2 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia*): 0,019 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 0,025 mg/l  
Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 0,00014 mg/l

Exposure time: 21 d

M-Factor (Acute aquatic toxicity) : 10  
Toxicity to bacteria : IC50 (Bacteria): 22 mg/l  
Method: OECD Test Guideline 209

M-Factor (Chronic aquatic toxicity) : 10

## 12.2 Persistence and degradability

### Product:

Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301D

### Components:

#### **Mecetronium ethyl sulfate (CAS: 3006-10-8):**

Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301

## 12.3 Bioaccumulative potential

no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of as hazardous waste in compliance with local and national regulations.  
The following Waste Codes are only suggestions:

Waste Code EU : 070601\* aqueous washing liquids and mother liquors

Contaminated packaging : Empty remaining contents.  
Store containers and offer for recycling of material when in accordance with the local regulations.

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## SECTION 14: Transport information

### 14.1 UN number

ADR : UN 1987

**IMDG** : UN 1987  
**IATA** : UN 1987

**14.2 UN proper shipping name**

**ADR** : ALCOHOLS, N.O.S. (isopropanol, n-propanol)  
**IMDG** : ALCOHOLS, N.O.S. (isopropanol, n-propanol)  
**IATA** : ALCOHOLS, N.O.S. (isopropanol, n-propanol)

**14.3 Transport hazard class**

**ADR** : 3  
**IMDG** : 3  
**IATA** : 3

**14.4 Packaging group**

**ADR**  
Packaging group : III  
Classification Code : F1  
Hazard Identification Number : 30  
Labels : 3  
Tunnel restriction code : D/E  
**IMDG**  
Packaging group : III  
Labels : 3  
EmS Number : F-E, S-D  
**IATA**  
Packaging group : III  
Labels : 3

**14.5 Environmental hazards**

**ADR**  
Environmentally hazardous : no  
**IMDG**  
Marine pollutant : no  
**IATA**  
Environmentally hazardous : no

**14.6 Special precautions for user**

not applicable

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

not applicable

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : not applicable

REACH - List of substances subject to authorisation (Annex : not applicable

XIV)

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

		Quantity1	Quantity2
6	Flammable.	5.000 t	50.000 t

Volatile organic compounds : Directive 1999/13/EC  
75,46 %  
VOC content excluding water

**15.2 Chemical Safety Assessment**

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

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

R11	Highly flammable.
R22	Harmful if swallowed.
R34	Causes burns.
R36	Irritating to eyes.
R41	Risk of serious damage to eyes.
R50/53	Very toxic 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.
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.
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
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

**Safety datasheet sections which have been updated:**

2. Hazards identification  
12. Ecological information

**Sterillium**

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