

# SAFETY DATA SHEET

## Sterillium

Version 1.7      Revision Date: 29.11.2018      SDS Number: R11036      Date of last issue: 22.10.2018  
Date of first issue: 25.03.2014

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sterillium

Product code : R11036

#### Manufacturer or supplier's details

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

Supplier :

Responsible Department : Scientific Affairs  
Kundenservice@SIDA-BODE-CHEMIE.de

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

#### Recommended use of the chemical and restrictions on use

Recommended use : In-door use  
Hand Sanitizer  
Human hygiene biocidal products  
For further information, refer to the product technical data sheet.

### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Flammable liquids : Category 3

Serious eye damage/eye irritation : Category 2A

Specific target organ toxicity -  
single exposure : Category 3

#### GHS label elements

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.

#### Prevention:

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.

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Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

### Disposal:

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

### Other hazards which do not result in classification

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Propan-2-ol	67-63-0	>= 30 - < 50
Propan-1-ol	71-23-8	>= 30 - < 50
tetradecanol	112-72-1	>= 0,1 - < 1
Mecetronium etilsulfate	3006-10-8	>= 0,1 - < 1

## 4. 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.

Most important symptoms and effects, both acute and delayed : Tiredness  
Light-headedness  
Dizziness  
Eye irritation

Notes to physician : For specialist advice physicians should contact the Poisons Information Service.

## 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : none

Specific hazards during fire-fighting : Cool closed containers exposed to fire with water spray.

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : Standard procedure for chemical fires.

Special protective equipment for firefighters : Use personal protective equipment.

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### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.  
Remove all sources of ignition.
- Environmental precautions : Should not be released into the environment.
- Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).

### 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.  
Vapours are heavier than air and may spread along floors.  
Vapours may form explosive mixtures with air.
- Advice on safe handling : Keep away from heat.
- Conditions for safe storage : Store at room temperature in the original container.
- Materials to avoid : Keep away from food and drink.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
Propan-1-ol	71-23-8	TWA	100 ppm	ACGIH

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

#### Personal protective equipment

- Protective measures : No special protective equipment required.
- Hygiene measures : Keep away from food and drink.  
Do not get in eyes.

### 9. 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

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Flash point	:	23 °C
		Method: DIN 51755 Part 1
Lower explosion limit / Lower flammability limit	:	Lower flammability limit 70 g/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

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### 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	None reasonably foreseeable.
Conditions to avoid	:	Heat Strong sunlight for prolonged periods.
Incompatible materials	:	None.

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### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity	:	LD50 Oral(Rat): 13.300 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: > 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	LD50 Dermal(Rabbit): > 8.500 mg/kg

##### Components:

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

Acute oral toxicity	:	LD50 Oral (Rat): > 5.000 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 5.000 mg/kg

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

Acute oral toxicity	:	LD50 Oral (Rat): 8.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 33,8 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 4.032 mg/kg Method: OECD Test Guideline 402

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

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

### **Mecetronium etilsulfate** (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**

#### **Product:**

Result: No skin irritation

#### **Components:**

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

Species: Rabbit  
Result: No skin irritation

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

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation

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

Method: OECD Test Guideline 404  
Result: No skin irritation

##### **Mecetronium etilsulfate** (CAS: 3006-10-8):

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: Causes burns.

### **Serious eye damage/eye irritation**

#### **Product:**

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

#### **Components:**

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

Species: Rabbit  
Result: Eye irritation

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

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: Irreversible effects on the eye

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

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: Irritating to eyes.

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**Mecetronium etilsulfate** (CAS: 3006-10-8):

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

**Respiratory or skin sensitisation**

**Product:**

Result: Does not cause skin sensitisation.

**Components:**

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

Test Type: Buehler Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

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

Test Type: Maximisation Test

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

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

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

**Mecetronium etilsulfate** (CAS: 3006-10-8):

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

**Germ cell mutagenicity**

**Components:**

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

Genotoxicity in vitro

: Test Type: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

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

Genotoxicity in vitro

: Test Type: in vitro assay

Result: negative

**Mecetronium etilsulfate** (CAS: 3006-10-8):

Germ cell mutagenicity - Assessment

: Not mutagenic in Ames Test

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Sterillium****Repeated dose toxicity**

No data available

**Aspiration toxicity**

No data available

**Experience with human exposure****Components:****Mecetronium etilsulfate** (CAS: 3006-10-8):

Ingestion : Symptoms: Gastrointestinal discomfort, Vomiting

**Toxicology, Metabolism, Distribution**

No data available

**Neurological effects**

No data available

**12. ECOLOGICAL INFORMATION****Ecotoxicity****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  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : IC50 (Bacteria): > 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: 96 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 Type: flow-through test  
Method: OECD Test Guideline 203
- 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 pyrenoidosa (aglae)): 1.150 mg/l

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Exposure time: 48 h  
Test Type: Growth inhibition

EC50 ( *Pseudokirchneriella subcapitata* (green algae)): 9.170 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition

Toxicity to microorganisms : 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)): > 1 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 3,2 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 etilsulfate** (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* (water flea)): 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 microorganisms : IC50 (Bacteria): 22 mg/l  
Method: OECD Test Guideline 209

M-Factor (Chronic aquatic toxicity) : 10

### **Persistence and degradability**

#### **Product:**

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



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### Components:

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

Biodegradability : Result: Readily biodegradable.  
Biodegradation: > 60 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

#### **Mecetronium etilsulfate** (CAS: 3006-10-8):

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

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Other adverse effects**

No data available

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## 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Dispose of as hazardous waste in compliance with local and national regulations.  
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

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

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## 14. TRANSPORT INFORMATION

### **ADR**

UN number : UN 1987  
Proper shipping name : ALCOHOLS, N.O.S.  
(propan-2-ol, propan-1-ol)  
Class : 3  
Packing group : III  
Labels : 3  
Hazard Identification Number : 30  
Tunnel restriction code : (D/E)

### **UNRTDG**

UN number : UN 1987  
Proper shipping name : ALCOHOLS, N.O.S.  
(propan-2-ol, propan-1-ol)  
Class : 3  
Packing group : III  
Labels : 3

### **IATA-DGR**

UN/ID No. : UN 1987  
Proper shipping name : Alcohols, n.o.s.  
(propan-2-ol, propan-1-ol)  
Class : 3  
Packing group : III  
Labels : Class 3 - Flammable Liquid  
Packing instruction (cargo aircraft) : 366  
Packing instruction (passenger) : 355

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aircraft)

### IMDG-Code

UN number : UN 1987  
Proper shipping name : ALCOHOLS, N.O.S.  
(propan-2-ol, propan-1-ol)  
Class : 3  
Packing group : III  
Labels : 3  
EmS Code : F-E, S-D  
Marine pollutant : no

### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## 15. REGULATORY INFORMATION

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

International Regulations

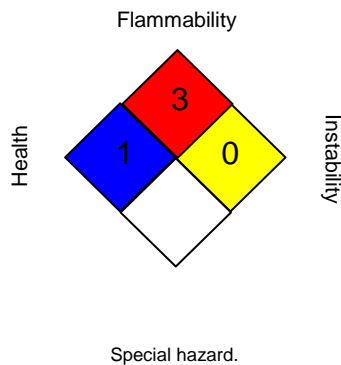
## 16. OTHER INFORMATION

### Safety datasheet sections which have been updated:

8. Exposure controls/personal protection

### Further information

#### NFPA:



#### HMIS® IV:

HEALTH		1
FLAMMABILITY		3
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)  
ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or

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Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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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.

TC / EN