

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

1.1 Product identifier

Trade name : Sterillium Virugard

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

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

Recommended restrictions on use : Restricted to professional users.

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

Highly flammable
Dangerous for the environment

R11: Highly flammable.
R52/53: Harmful 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

Hazard symbols :



Highly flammable

R-phrase(s)

: R11
R52/53

Highly flammable.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

: S 9
S16

Keep container in a well-ventilated place.
Keep away from sources of ignition - No smoking.

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2.3 Other hazards

none

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. REACH Registration Number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Ethanol	64-17-5 200-578-6 01-2119457610-43	F; R11	Flam. Liq. 2; H225	$\geq 50 - \leq 100$
low boiling point hydrogen treated naphtha	921-024-6 01-2119475514-35	F; R11 Xn; R65 Xi; R38-R67 N; R51/53	Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	$\geq 1 - < 2,5$
tetradecanol	112-72-1 204-000-3 01-2119485910-33	Xi; R36	Eye Irrit. 2; H319 Aquatic Chronic 1; H410	$\geq 1 - < 3$
n-hexane	110-54-3 203-777-6	F; R11 Repr.Cat.3; R62 Xn; R48/20-R65 Xi; R38 R67 N; R51-R53	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361f STOT SE 3; H336 STOT RE 2; H373 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	$< 0,25$

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 : If you feel unwell, seek medical advice (show the label where possi-

ble).

- | | |
|------------------------|--|
| If inhaled | : Move to 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

no data available

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
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| Treatment | : For specialist advice physicians should contact the Poisons Information Service. |
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SECTION 5: Firefighting measures

5.1 Extinguishing media

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| 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 data available |

5.3 Advice for firefighters

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion : Take measures to prevent the build up of electrostatic charge. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Keep away from heat and sources of ignition.

Hygiene measures : Ensure adequate ventilation, especially in confined areas. 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.

Further information on storage conditions : Storage must be in accordance with the BetrSichV (Germany).

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

DNEL
Ethanol (CAS: 64-17-5) : End Use: Consumers
Exposure routes: Ingestion
Value: 87 mg/kg

tetradecanol (CAS: 112-72-1) : 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/m³

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/m³

End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Acute effects
Value: 75 mg/kg

PNEC

Ethanol (CAS: 64-17-5)

: Fresh water
Value: 0,96 mg/l

Fresh water sediment
Value: 3,6 mg/kg

Marine water
Value: 0,76 mg/l

Soil
Value: 0,63 mg/kg

tetradecanol (CAS: 112-72-1)

: 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	: colourless
Odour	: alcohol-like
Odour Threshold	: no data available
pH	: no data available
Melting point/range	: not determined
Boiling point/boiling range	: 76 °C
Flash point	: 0 °C Method: DIN 51755 Part 1
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Burning rate	: no data available
Lower explosion limit	: 58 mg/m ³ Method: DIN 51649
Upper explosion limit	: no data available
Vapour pressure	: 18 kPa at 50 °C
Relative vapour density	: no data available
Relative density	: no data available
Density	: 0,79 g/cm ³ at 20 °C
Water solubility	: partly miscible
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: no data available

Oxidizing properties : no data available

9.2 Other information

Conductivity : no data available

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product

Acute oral toxicity : LD50 Oral rat: > 12.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : no data available

Acute dermal toxicity : LD50 Dermal rat: > 2.000 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : no data available

Skin corrosion/irritation : Result: No skin irritation

Serious eye damage/eye irritation : Result: No eye irritation

Respiratory or skin sensitisation : Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Genotoxicity in vitro : no data available

Genotoxicity in vivo : no data available

Carcinogenicity : This information is not available.

Reproductive toxicity : This information is not available.

Teratogenicity : This information is not available.

STOT - single exposure : Remarks: no data available

Repeated dose toxicity :
Note: This information is not available.

STOT - repeated exposure : Remarks: no data available

Components:

Ethanol (CAS: 64-17-5) :

Acute oral toxicity : LD50 Oral rat: 6.200 mg/kg

Acute inhalation toxicity : LC50 rat: 124,7 mg/l
Exposure time: 4 h

Skin corrosion/irritation : Species: rabbit
Exposure time: 24 h
Result: Mild skin irritation
Method: Draize Test

Serious eye damage/eye irritation : Species: rabbit
Exposure time: 24 h
Result: Mild eye irritation
Method: Draize Test

low boiling point hydrogen treated naphtha :

Acute oral toxicity : LD50 rat: > 5.000 mg/kg

Acute inhalation toxicity : LC50 rat: > 20 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 rat: > 2.000 mg/kg

Skin corrosion/irritation : Result: Skin irritation

Serious eye damage/eye irritation : Result: No eye irritation

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STOT - single exposure : Exposure routes: Inhalation
Target Organs: Nervous system
Assessment: May cause drowsiness or dizziness.

Aspiration toxicity : May be fatal if swallowed and enters airways.

tetradecanol (CAS: 112-72-1) :

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

Skin corrosion/irritation : Result: No skin irritation
Method: OECD Test Guideline 404

Serious eye damage/eye irritation : Result: Eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation : Result: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406

n-hexane (CAS: 110-54-3) :

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

Acute inhalation toxicity : LC50 rat: 172 mg/l
Exposure time: 4 h
Method: OECD Test Guideline 403

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

Skin corrosion/irritation : Result: Skin irritation

Serious eye damage/eye irritation : Result: No eye irritation

STOT - single exposure : Exposure routes: Inhalation
Target Organs: Nervous system
Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure : Exposure routes: Ingestion
Target Organs: Nervous system
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity : May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Toxicity to bacteria : no data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : no data available

Components:

Ethanol (CAS 64-17-5) :

Toxicity to fish : LC50 (Fish): 13.000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 12.340 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 5.000 mg/l
Exposure time: 72 h

low boiling point hydrogen treated naphtha :

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 11,4 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata): 30 mg/l
Exposure time: 72 h

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

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

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	Exposure time: 72 h Test Method: 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
n-hexane (CAS 110-54-3) : Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 11,4 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 3 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata (green algae)): 30 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Ecotoxicology Assessment

Chronic aquatic toxicity	: Toxic to aquatic life with long lasting effects.
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12.2 Persistence and degradability

Product:

Biodegradability	: no data available
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12.3 Bioaccumulative potential

Product:

Bioaccumulation	: no data available
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12.4 Mobility in soil

Product:

Distribution among environmental compartments	: no data available
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12.5 Results of PBT and vPvB assessment

Product:

Assessment	: no data available
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12.6 Other adverse effects

Product:

Adsorbed organic bound halogens (AOX)	: no data available
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SECTION 13: Disposal considerations

13.1 Waste treatment methods

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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.

SECTION 14: Transport information

14.1 UN number

ADR	: UN 1170
IMDG	: UN 1170
IATA	: UN 1170

14.2 UN proper shipping name

ADR	: ETHANOL, SOLUTION (ETHYL ALCOHOL, SOLUTION)
IMDG	: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
IATA	: ETHANOL SOLUTION

14.3 Transport hazard class

ADR	: 3
IMDG	: 3
IATA	: 3

14.4 Packaging group

ADR	
Packaging group	: II
Classification Code	: F1
Hazard Identification Number	: 33
Labels	: 3
Tunnel restriction code	: D/E
IMDG	
Packaging group	: II
Labels	: 3
EmS Number	: F-E, S-D
IATA	
Packaging group	: II
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

Notification status

CH INV	: The formulation contains substances listed on the Swiss Inventory
TSCA	: On TSCA Inventory
DSL	: All components of this product are on the Canadian DSL.
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

For explanation of abbreviations see section 16.

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 referred to under sections 2 and 3

R11	Highly flammable.
R36	Irritating to eyes.
R38	Irritating to skin.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51	Toxic to aquatic organisms.
R51/53	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.
R53	May cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Full text of other abbreviationsNotification status

CH INV	: Switzerland. New notified substances and declared preparations
TSCA	: Toxic substances control act
DSL	: Canada. DSL - Domestic Substances List, part of CEPA
AICS	: Australia. AICS - Australian Inventory of Chemical Substances
NZIoC	: New Zealand Inventory of Chemical Substances
ENCS	: Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	: Japan. Industrial Safety and Health Law - Inventory
KECI	: Korea. KECI - Korean Existing Chemicals Inventory
PICCS	: Philippines. PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC	: China. IECSC - Inventory of Existing Chemical Substances in China

Safety datasheet sections which have been updated:

3. Hazards identification

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.