

SAFETY DATA SHEET

Sterillium Virugard

Version 1.3

Revision Date 18.09.2015

Print Date 08.10.2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Sterillium Virugard

Product code : R11037

Manufacturer or supplier's details

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

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
For further information, refer to the product technical data sheet.

Restrictions on use : Biocides

2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 2

Eye irritation : Category 2A

Chronic aquatic toxicity : Category 3

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : P102 Keep out of reach of children.
Prevention:
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P273 Avoid release to the environment.
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.

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P370 + P378 In case of fire: Use alcohol-resistant foam, carbon dioxide or water mist to extinguish.

Disposal:

P501 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
Chemical nature : Alcoholic solution

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
Ethanol	64-17-5	$\geq 90 - \leq 100$
Naphtha (petroleum), hydrotreated light	Not Assigned	$\geq 1 - < 2,5$
tetradecanol	112-72-1	$\geq 1 - < 5$
n-hexane	110-54-3	$\geq 0,1 - \leq 0,25$

4. FIRST AID MEASURES

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of eye contact : Rinse thoroughly with plenty of water, also under the eyelids.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do NOT induce vomiting.
If accidentally swallowed obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed : None known.

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

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Dry powder
Carbon dioxide (CO₂)

Unsuitable extinguishing media : High volume water jet

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

Hazardous combustion products : No hazardous combustion products are known

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

6. ACCIDENTAL RELEASE MEASURES

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- 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 safe handling : Keep away from fire, sparks and heated surfaces.
- Conditions for safe storage : Store at room temperature in the original container.
- Recommended storage temperature : 5 - 25 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
n-hexane	110-54-3	TWA	50 ppm	ACGIH
		TWA	50 ppm 180 mg/m ³	NIOSH REL
		TWA	500 ppm 1.800 mg/m ³	OSHA Z-1
		TWA	50 ppm 180 mg/m ³	OSHA P0

Personal protective equipment

- Protective measures : No special protective equipment required.
- Hygiene measures : Keep away from food and drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : colourless
- Odour : alcohol-like
- pH : Not applicable
- Melting point/range : not determined
- Boiling point/boiling range : 76 °C
- Flash point : 0 °C
Method: DIN 51755 Part 1
- Flammability (solid, gas) : No data available
- Lower explosion limit : 58 g/m³
Method: DIN 51649

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Vapour pressure	: 18 kPa (50 °C)
Density	: 0,79 g/cm ³ (20 °C)
Solubility(ies) Water solubility	: partly miscible

10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: The product is chemically stable.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air. Exothermic reaction with strong acids.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Strong acids and oxidizing agents

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: LD50 Oral(Rat): > 12.000 mg/kg Method: Calculation method
Acute dermal toxicity	: LD50 Dermal(Rat): > 2.000 mg/kg Method: Calculation method

Components:

Ethanol (CAS: 64-17-5):

Acute oral toxicity	: LD50 Oral (Rat): 10.470 mg/kg
Acute inhalation toxicity	: LC50 (Rat): 51 mg/l Exposure time: 4 h
Acute dermal toxicity	: LD50 Dermal (Rabbit): > 15.800 mg/kg

Naphtha (petroleum), hydrotreated light:

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

tetradecanol (CAS: 112-72-1):

Acute oral toxicity	: LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	: LC50 (Rat): 1,5 mg/l Exposure time: 1 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rabbit): > 2.000 mg/kg

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

Acute oral toxicity	: LD50 (Mouse): 5.000 mg/kg
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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

Product:

Result: No skin irritation

Components:

Ethanol (CAS: 64-17-5):

Species: human skin

Result: Mild skin irritation

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

Naphtha (petroleum), hydrotreated light:

Result: Skin irritation

tetradecanol (CAS: 112-72-1):

Method: OECD Test Guideline 404

Result: No skin irritation

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

Result: Skin irritation

Serious eye damage/eye irritation

Product:

Result: Eye irritation

Components:

Ethanol (CAS: 64-17-5):

Species: Rabbit

Result: irritating

Naphtha (petroleum), hydrotreated light:

Result: No eye irritation

tetradecanol (CAS: 112-72-1):

Species: Rabbit

Method: OECD Test Guideline 405

Result: Eye irritation

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

Result: No eye irritation

Respiratory or skin sensitisation

Product:

Result: Does not cause skin sensitisation.

Components:

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tetradecanol (CAS: 112-72-1):

Method: OECD Test Guideline 406

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:

No data available

Carcinogenicity

Product:

No data available

Reproductive toxicity

Product:

No data available

STOT - single exposure

Product:

No data available

Components:

Naphtha (petroleum), hydrotreated light:

Exposure routes: Inhalation

Target Organs: Nervous system

Assessment: May cause drowsiness or dizziness.

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

Exposure routes: Inhalation

Target Organs: Nervous system

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Product:

No data available

Components:

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

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

Product:

No data available

Components:

Naphtha (petroleum), hydrotreated light:

May be fatal if swallowed and enters airways.

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

May be fatal if swallowed and enters airways.

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12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment

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

Components:

Ethanol:

Toxicity to fish : LC50 (Fish): 11.200 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.012 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 275 mg/l
Exposure time: 96 h

Naphtha (petroleum), hydrotreated light:

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 (microalgae)): 30 mg/l
Exposure time: 72 h

Ecotoxicology Assessment

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

tetradecanol:

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 (Desmodemus 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

n-hexane:

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

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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.

Persistence and degradability

Product:

Biodegradability : Result: Readily biodegradable.
Remarks: The data is estimated based on the component aquatic toxicity classification.

Components:

tetradecanol:

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

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Results of PBT and vPvB 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.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of as hazardous waste in compliance with local and national regulations.

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

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

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14.3 Transport hazard class(es)

ADR : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADR
Packing group : II
Classification Code : F1
Hazard Identification Number : 33
Labels : 3
Tunnel restriction code : D/E

IMDG
Packing group : II
Labels : 3
EmS Code : F-E, S-D

IATA
Packing group : II
Labels : 3

14.5 Environmental hazards

ADR
Environmentally hazardous : no

IMDG
Marine pollutant : 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 for product as supplied.

15. REGULATORY INFORMATION

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 XIV) : Not applicable

16. OTHER INFORMATION

Safety datasheet sections which have been updated:

2. Hazards identification

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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.