Bactoshield® CHG 4%
Chlorhexidine Gluconate 4% Solution Antiseptic
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Date of issue: 03/30/2015
Version: 1.0

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

1.1. Product identifier
Product form: Mixture
Trade name: Bactoshield® CHG 4% Chlorhexidine Gluconate 4% Solution Antiseptic
Product code: 1344

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Industrial/Professional use spec.: For hospital and professional use only. Not for home use.

Use of the substance/mixture: Antiseptic solution

1.3. Details of the supplier of the safety data sheet
STERIS Corporation
P. O. Box 147, St. Louis, MO 63166, US
Telephone Number for Information: 1-800-548-4873 (Customer Service - Healthcare Products)

1.4. Emergency telephone number
Emergency number: US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US Classification
Skin Irrit. 2 H315
Eye Dam. 1 H318
Carc. 2 H351

2.2. Label elements - This product is regulated by the FDA and is exempt from GHS labeling.
FDA Product Labeling: This product is regulated by the FDA, therefore, the requirements for product labeling do not fall under the jurisdiction of the OSHA Hazard Communication Standard according to 29 CFR 1910.1200.

Hazard pictograms (GHS-US): -

Signal word (GHS-US): Danger
Hazard statements (GHS-US): H315 – Causes skin irritation.
H318 – Causes serious eye damage.
H351 – Suspected of causing cancer.

Precautionary statements (GHS-US): P202 – Do not handle until all safety precautions have been read and understood.
P264 – Wash hands thoroughly after handling.
P280 – Wear protective clothing, protective gloves, eye and face protection.
P302+P352 – If on skin: wash with plenty of water.
P305+P351+P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 – If exposed or concerned: Get medical attention.
P310 – Immediately call a Poison Center or/doctor.
P332+P313 – If skin irritation occurs: Get medical advice/attention.
P362 – Take off contaminated clothing and wash before reuse.
P405 – Store locked up.

2.3. Other hazards
No additional information available.

2.4. Unknown acute toxicity (GHS-US)
No data available.

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable.
Full text of H-phrases: see Section 16.
Full text of R- and H- phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: No specific first aid necessary for this route of exposure.
First-aid measures after skin contact: Wash with soap and water. Seek medical attention if skin irritation develops or persists.
First-aid measures after eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.
First-aid measures after ingestion: Do NOT induce vomiting. Seek medical attention.

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

Symptoms/injuries after inhalation: None under normal use.
Symptoms/injuries after skin contact: Causes skin irritation.
Symptoms/injuries after eye contact: Causes serious eye damage.
Symptoms/injuries after ingestion: May be harmful if swallowed.

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

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical powder, alcohol foam, carbon dioxide, water spray, fog.
Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Not flammable. Thermal decomposition may produce toxic fumes of ammonia, hydrogen chloride and oxides of carbon and nitrogen.
Explosion hazard: None known.

5.3. Advice for firefighters

Protective equipment for firefighters: Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
No additional information available.

6.1.2. For emergency responders
No additional information available.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Stop the flow of material, if this is without risk.
Methods for cleaning up: Confine spill and soak up with absorbent. Place in an approved container and dispose in accordance with local, state and federal regulations.

6.4. Reference to other sections
See Heading 8: Exposure controls and personal protection.
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SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Avoid contact with eyes. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep away from open flames, hot surfaces and sources of ignition. Store at temperatures not exceeding 37°C.

7.3. Specific end use(s)
Pharmaceutical Agent.

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

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (ppm)</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH STEL (ppm)</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls: Provide adequate general and local exhaust ventilation.
Hand protection: Wear impervious gloves to minimize skin contact.
Eye protection: Wear chemical goggles or safety glasses.
Skin and body protection: Wear suitable working clothes.
Respiratory protection: None required under normal product handling conditions.

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

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>97°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;200°F</td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.06 g/ml (Specific gravity)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Soluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information
No additional information available.
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**SECTION 10: Stability and reactivity**

10.1. **Reactivity**
No additional information available.

10.2. **Chemical stability**
The product is stable at normal handling and storage conditions.

10.3. **Possibility of hazardous reactions**
Will not occur.

10.4. **Conditions to avoid**
Storage in excess heat (104°F) over a long period of time.

10.5. **Incompatible materials**
None.

10.6. **Hazardous decomposition products**
Thermal decomposition may produce toxic fumes of ammonia, hydrogen chloride and oxides of carbon and nitrogen.

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**SECTION 11: Toxicological information**

11.1. **Information on toxicological effects**

**Acute toxicity**
- Not classified.

**Water (7732-18-5)**
- LD50 oral rat: > 90 mL/kg

**Chlorhexidine digluconate (18472-51-0)**
- LD50 oral rat: 2 g/kg
- ATE (oral): 500.000 mg/kg

**Isopropyl alcohol (67-63-0)**
- LD50 oral rat: 4396 mg/kg
- LD50 dermal rat: 12800 mg/kg
- LD50 dermal rabbit: 12870 mg/kg
- LC50 inhalation rat (mg/L): 72.6 mg/L (Exposure time: 4 h)

**Proprietary Component 6 (Proprietary)**
- LD50 oral rat: 7930 mg/kg
- ATE (oral): 7930.000 mg/kg bodyweight

- Skin corrosion/irritation: Causes skin irritation.
- Serious eye damage/irritation: Causes serious eye damage.
- Respiratory or skin sensitisation: Not classified.
- Germ cell mutagenicity: Not classified.
- Carcinogenicity: Suspected of causing cancer.

**Isopropyl alcohol (67-63-0)**
- IARC group: 3

**Proprietary Component 3 (Proprietary)**
- IARC group: 2B
- National Toxicity Program (NTP) Status: 1

- Reproductive toxicity: Not classified.
- Specific target organ toxicity (single exposure): Not classified.
- Specific target organ toxicity (repeated exposure): Not classified.
- Aspiration hazard: Not classified.

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**SECTION 12: Ecological information**

12.1. **Toxicity**

**Isopropyl alcohol (67-63-0)**
- LC50 fishes 1: 9640 mg/L (Exposure time: 96 h – Species: Pimephales promelas [flow-through])
- EC50 Daphnia 1: 13299 mg/L (Exposure time: 48 h – Species: Daphnia magna)
- EC50 other aquatic organisms 1: > 1000 mg/L (Exposure time: 96 h – Species: Desmodesmus subspicatus)
- LC50 fish 2: 11130 mg/L (Exposure time: 96 h – Species: Pimephales promelas [static])
- EC50 other aquatic organisms 2: > 1000 mg/L (Exposure time: 72 h – Species: Desmodesmus subspicatus)
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<table>
<thead>
<tr>
<th>Proprietary Component 3 (Proprietary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
</tr>
<tr>
<td>3.6 mg/L (Exposure time: 96 h – Species: Brachydanio rereio [semi-static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>4.2 mg/L (Exposure time: 24 h – Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability  
No additional information available.

12.3. Bioaccumulative potential  
**Isopropyl alcohol (67-63-0)**  
Log Pow 0.05 (at 25°C)

12.4. Mobility in soil  
No additional information available.

12.5. Other adverse effects  
No additional information available.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods  
Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations.

**SECTION 14: Transport information**

14.1. UN number  
Not regulated.

14.2. UN proper shipping name  
DOT Proper Shipping Name: Chlorhexidine Gluconate Aqueous Solutions of alcohol containing 24% or less alcohol by volume and no other hazardous material is not regulated.

**SECTION 15: Regulatory information**

15.1. US Federal regulations  
**Water (7732-18-5)**  
Listed on the United States TSCA (Toxic Substances Control Act) Inventory

**Chlorhexidine digluconate (18472-51-0)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Isopropyl alcohol (67-63-0)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on the SARA Section 313 (Specific toxic chemical listings)  
EPA TSCA Regulatory Flag T – T – indicates a substance that is the subject of a Section 4 test rule under TSCA.  
SARA Section 313 – Emission Reporting 1.0% (only if manufactured by the strong acid process, no supplier notification)

**Proprietary Component 2 (Proprietary)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Proprietary Component 3 (Proprietary)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Proprietary Component 5 (Proprietary)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Proprietary Component 1 (Proprietary)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Proprietary Component 4 (Proprietary)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Proprietary Component 6 (Proprietary)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory
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#### 15.2. US State regulations

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. – Massachusetts – Right To Know List</td>
</tr>
<tr>
<td>U.S. – Minnesota – Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. – New Jersey – Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. – Pennsylvania – RTK (Right To Know) List</td>
</tr>
</tbody>
</table>

#### SECTION 16: Other information

**Revision Date**: 03/30/2015  
**Sources of Key data**: None.  
**Other information**: None.

**Full text of H-phrases:**

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc. 2</td>
<td>Carcinogenicity, Category 2</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>Flammable liquids, Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
<td>Flammable liquids, Category 3</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapor</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
</tbody>
</table>

**NFPA health hazard**: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.  
**NFPA fire hazard**: 1 - Materials require considerable preheating before ignition and combustion can occur.  
**NFPA reactivity**: 0 - Normally stable, even under fire exposure conditions, and is not reactive with water.

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SDS US (GHS HazCom 2012)

The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.