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

1.1. Product identifier
Product name: Chlorhexidine Gluconate 4% Topical Solution

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Pharmaceutical Agent

1.3. Details of the supplier of the safety data sheet
Xttrium Laboratories, Inc.
1200 East Business Center Drive
Mt. Prospect, IL 60056

1.4. Emergency telephone number
Emergency number: 773-268-5800

SECTION 2: Hazards identification

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

2.2. Label elements
GHS-US labeling
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):
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash thoroughly after handling
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 advice/attention
P310 - Immediately call a poison center/doctor if skin irritation occurs
P321 - Specific treatment (see label)
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

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. Substances
Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td></td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Chlorhexidine digluconate</td>
<td>(CAS No) 18472-51-0</td>
<td></td>
<td>Trade Secret</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>(CAS No) 67-63-0</td>
<td>&lt;5 %</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td>Proprietary Component 1</td>
<td>(CAS No) Proprietary</td>
<td></td>
<td>Trade Secret</td>
</tr>
</tbody>
</table>
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: No specific first aid necessary for this route of exposure. If skin irritation develops or persists, seek medical attention.
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: None anticipated under normal use. If skin irritation occurs, stop use of product and seek medical attention.
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

Protection during firefighting: 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

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid contact with eyes. Wash 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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>200 ppm</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH STEL (ppm)</td>
<td>400 ppm</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>980 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Provide adequate general and local exhaust ventilation.

Hand protection: No protection required during normal use.

Eye protection: No protection required during normal use; however, if contact with the eyes occurs, flush with plenty of water for at least 15 minutes.

Skin and body protection: None required under normal product handling conditions.

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>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Slightly yellowish liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>5.00 - 6.80</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>Vapour 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>Specific gravity</td>
<td>1.0000 - 1.0300</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>Oxidising 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

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.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity**: Not classified

<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 90 ml/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chlorhexidine digluconate (18472-51-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>2 g/kg</td>
</tr>
<tr>
<td>ATE (oral)</td>
<td>500.000 mg/kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>4396 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>12800 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>12870 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>72.6 mg/l (Exposure time: 4 h)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proprietary Component 6 (Proprietary)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>7930 mg/kg</td>
</tr>
<tr>
<td>ATE (oral)</td>
<td>7930.000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

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

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>EC50 other aquatic organisms 1</td>
<td>&gt; 1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])</td>
</tr>
<tr>
<td>EC50 other aquatic organisms 2</td>
<td>&gt; 1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proprietary Component 3 (Proprietary)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
<td>3.6 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<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

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>0.05 (at 25 °C)</td>
</tr>
</tbody>
</table>
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
In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA
14.1. UN number
Not applicable
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.

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 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

15.2. US State regulations

Proprietary Component 3 (Proprietary)
U.S. - California - Proposition 65 - Carcinogens List
Yes

Proprietary Component 4 (Proprietary)
U.S. - California - Proposition 65 - Reproductive Toxicity - Female

Proprietary Component 5 (Proprietary)
U.S. - California - Proposition 65 - Reproductive Toxicity - Male

Proprietary Component 6 (Proprietary)
U.S. - California - Proposition 65 - No significance risk level (NSRL)

Isopropyl alcohol (67-63-0)
U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
SECTION 16: Other information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.