SAFETY DATA SHEET

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: CHLORHEXIDINE GLUCONATE SOLUTION, USP (20%)

PRODUCT CODE: 2755

SUPPLIER:
- MEDISCA Inc.
  Tel.: 1.800.932.1039 | Fax.: 1.855.850.5855
  661 Route 3, Unit C, Plattsburgh, NY, 12901
  3955 W. Mesa Vista Ave., Unit A-10, Las Vegas, NV, 89118
  6641 N. Belt Line Road, Suite 130, Irving, TX, 75063

- MEDISCA Pharmaceutique Inc.
  Tel.: 1.800.665.6334 | Fax.: 514.338.1693
  4509 Rue Dobrin, St. Laurent, QC, H4R 2L8
  21300 Gordon Way, Unit 153/158, Richmond, BC V6W 1M2

- MEDISCA Australia PTY LTD
  Tel.: 1.300.786.392 | Fax.: 61.2.9700.9047
  Unit 7, Heritage Business Park
  5-9 Ricketty Street, Mascot, NSW 2020

EMERGENCY PHONE:
- CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
- NSW Poisons Information Centre: 131 126

USES: Antiseptic

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:
- Eye Damage (Category 1)
- Sensitization - Respiratory (Category 1)
- Sensitization - Skin (Category 1)
- Chronic Aquatic Toxicity (Category 1)

PICTOGRAM:

SIGNAL WORD: Danger

HAZARD STATEMENT(S):
- May be harmful if swallowed.
- May cause skin irritation.
- Causes serious eye damage.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause an allergic skin reaction.
- Very toxic to aquatic life with long lasting effects.

AUSTRALIA-ONLY HAZARDS:
- Not applicable

PRECAUTIONARY STATEMENT(S):
- Prevention
  - Wear eye and face protection protection.
  - Avoid breathing dust, fume, gas, mist, vapors, spray.
  - In case of inadequate ventilation wear respiratory protection.
  - Contaminated work clothing must not be allowed out of the workplace.
  - Wear protective gloves.
  - Avoid release to the environment.
SAFETY DATA SHEET

RESPONSE

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, call a poison center or medical professional.

IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. COLLECT SPILLAGE.

STORAGE

Not applicable

DISPOSAL

Dispose of contents in accordance with local regulation.

HMIS CLASSIFICATION

Health Hazard: 2
Flammability: 0
Reactivity: 0
Personal Protection: E

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME: Not applicable
BOTANICAL NAME: Not applicable
SYNONYM: Not applicable
CHEMICAL FORMULA: Not applicable
CAS NUMBER: Not applicable
ALTERNATE CAS NUMBER: Not applicable
MOLECULAR WEIGHT: Not applicable

COMPOSITION

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHLORHEXIDINE GLUCONATE</td>
<td>18472-81-0</td>
<td>19-21</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as health hazards and hence require reporting in this section.

NOTES

Balance is water
Chemical family: Biguanide.

SECTION 4: FIRST-AID MEASURES

IN CASE OF EYE CONTACT

Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.

IN CASE OF SKIN CONTACT

Wash with soap & water for 15 minutes. If irritation persists seek medical aid.

IF SWALLOWED

Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.

IF INHALED

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SYMPTOMS AND EFFECTS

Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 5: FIREFIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Not applicable

FLAMMABLE PROPERTIES

May be combustible at high temperature.
HAZARDOUS COMBUSTION PRODUCTS
Under fire conditions, hazardous fumes will be present.

EXTINGUISHING MEDIA
Small fire: dry chemical, CO₂ or water spray. Large fire: dry chemical, CO₂, alcohol resistant foam or water spray. Do not get water inside containers.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

METHODS & MATERIAL FOR CONTAINMENT
On land, sweep or shovel into suitable containers.

CLEANUP PROCEDURE
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition. Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING
Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

STORAGE CONDITIONS
Store in original container, tightly sealed container, protected from direct sunlight, in a dry, and well-ventilated area, away from incompatible materials. Store in accordance with local regulations. Eliminate all ignition sources. Separate from oxidizing materials. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

CONTROLLED ROOM TEMPERATURE
Controlled room temperature indicates a temperature 20° to 25°C (68° to 77°F); that results in a mean kinetic temperature calculated to be not more than 25°C; and that allows for excursions between 15° and 30°C (59° and 86°F) that are experienced in pharmacies, hospitals, and warehouses. Provided the mean kinetic temperature remains in the allowed range, transient spikes up to 40°C (104°F) are permitted as long as they do not exceed 24 hours.

Preserve in tight containers, protected from light, at controlled room temperature.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Chemical Name: CHLORHEXIDINE GLUCONATE</th>
<th>CAS #: 18472-51-0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NIOSH</strong></td>
<td>TWA</td>
</tr>
<tr>
<td>N/L</td>
<td>N/L</td>
</tr>
<tr>
<td><strong>AIHA WEEL</strong></td>
<td>N/L</td>
</tr>
<tr>
<td><strong>Safe Work Australia HSIS</strong></td>
<td>N/L</td>
</tr>
<tr>
<td><strong>HSE</strong></td>
<td>N/L</td>
</tr>
<tr>
<td><strong>OSHA PEL</strong></td>
<td>N/L</td>
</tr>
<tr>
<td><strong>ACGIH TLV</strong></td>
<td>N/L</td>
</tr>
</tbody>
</table>

N/L = Not Listed

Last Revision: 04/2017

CHLORHEXIDINE GLUCONATE SOLUTION, USP (20%)
EXPOSURE GUIDELINES
Consult local authorities for provincial or state exposure limits. Particulates not otherwise regulated, respirable fraction: 5 mg/m³

PERSONAL PROTECTIVE EQUIPMENT
**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to minimize contact with skin. **Respirators:** Follow WHMIS or OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SPECIFIC ENGINEERING CONTROLS
Adequate mechanical ventilation. Fume hood, eye wash station, and safety shower.

NOTES
CHLORHEXIDINE GLUCONATE:
USP ELV: Industrial: TWA 10 micrograms/m³
CEL TWA: 0.0027 ppm; 0.1 mg/m³* * [AstraZeneca]

CHLORHEXIDINE GLUCONATE SOLUTION (20%):
Composite Exposure Standard for Mixture (TWA) (mg/m³): 0.1 mg/m³
Component Breathing zone Mixture Conc:
Chlorhexidine gluconate 0.00 ppm, 0.1000 mg/m³, 20.0 %
Composite Exposure Standard for Mixture: (TWA) (mg/m³): 20 mg/m³

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Almost colorless or pale yellow, clear liquid. Is odorless or almost odorless.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Miscible with glacial acetic acid and with water; miscible with three times its volume of acetone and with five times its volume of dehydrated alcohol; further addition of acetone or dehydrated alcohol yields a white turbidity.</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless or almost odorless.</td>
</tr>
<tr>
<td>Flammability</td>
<td>May be combustible at high temperature</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5 - 7.0</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>100°C, 212°F</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>-5°C, 23°F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.06 - 1.07</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable/Explosive Limit(s)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable/Explosive Limit(s)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>2.66</td>
</tr>
<tr>
<td>Vapour Density (Air = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density (Water = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Log P (Octanol-Water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Not established
## SAFETY DATA SHEET

### STABILITY
Stable under recommended storage conditions

### MATERIALS TO AVOID
Strong oxidants

### HAZARDOUS DECOMPOSITION PRODUCTS
Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and other gases may occur

### HAZARDOUS POLYMERIZATION
Will not occur

### POSSIBLITY OF HAZARDOUS REACTION
Not established

### CONDITIONS TO AVOID
Moisture, sunlight and extreme temperatures. Light sensitive.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY

<table>
<thead>
<tr>
<th>Substance</th>
<th>Rat: Oral LD₅₀ (mg/kg)</th>
<th>Rabbit: Dermal LD₅₀ (mg/kg)</th>
<th>Rat: Inhalation LD₅₀ (mg/L/4hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>2000</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Chlorhexidine Gluconate Solution (20%)*</td>
<td>10,000</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

*Values for mixture are calculated based on known values for toxicity of the components.

#### SKIN CORROSION/IRRITATION
Due to lack of data the classification is not possible.

#### SERIOUS EYE DAMAGE/EYE IRRITATION
Causes serious eye damage.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Rabbit: Eye irritancy</th>
<th>Unspecified animals: 20% solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>Moderately irritating</td>
<td>Severely irritating</td>
</tr>
</tbody>
</table>

#### RESPIRATORY OR SKIN SENSITIZATION
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Anaphylactic reactions have been reported.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Guinea pig: Skin sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>Weakly sensitizing</td>
</tr>
</tbody>
</table>

Contact dermatitis and occupational asthma following exposure to this material have been reported. Individuals with eczema, leg ulcers, or leg eczema are more prone to chlorhexidine allergies.

#### GERM CELL MUTAGENICITY
Due to lack of data the classification is not possible.

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>in vitro Ames test</td>
<td>Negative</td>
</tr>
<tr>
<td>In vivo cytogenics assay in hamsters</td>
<td>Negative</td>
</tr>
<tr>
<td>In vivo dominant lethal assay in mice</td>
<td>Negative</td>
</tr>
<tr>
<td>In vivo mouse micronucleus test</td>
<td>Negative</td>
</tr>
</tbody>
</table>

#### CARCINOGENICITY

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>No component of this product, present at ≥0.1%, is listed.</td>
</tr>
<tr>
<td>NTP</td>
<td>No component of this product, present at ≥0.1%, is listed.</td>
</tr>
<tr>
<td>IARC</td>
<td>No component of this product, present at ≥0.1% has been evaluated.</td>
</tr>
<tr>
<td>California Prop 65</td>
<td>No component of this product, present at ≥0.1% is known to the State of California to cause cancer, birth defects, or any other reproductive harm.</td>
</tr>
</tbody>
</table>

#### ADDITIONAL CARCINOGENICITY INFORMATION
Due to lack of data the classification is not possible.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Long-term carcinogenicity, administered in drinking water: Rat: 2 years: 50 mg/kg/day: No evidence of carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorhexidine Gluconate</td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

IDENTIFIER

CHLORHEXIDINE GLUCONATE

SECTION 2: HAZARDS IDENTIFICATION

GHS classification

Hazard statements

Due to lack of data the classification is not possible.

CHEMICAL IDENTIFIER

CHLORHEXIDINE

SECTION 3: SAFETY PRECAUTIONS

Safeguard

Due to lack of data the classification is not possible.

SECTION 4: FIRST AID MEASURES

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Ingestion

May be harmful if swallowed.

Skin

May be harmful if absorbed through skin. May cause skin irritation. May cause an allergic skin reaction.

Eyes

Causes serious eye damage.

SECTION 5: FIRE FIGHTING MEASURES

Specific hazard

Not available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Precaution

Not available

SECTION 7: HANDLING AND STORAGE

Precaution

Not available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Precaution

Not available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Precaution

Not available

SECTION 10: STABILITY AND REACTIVITY

Precaution

Not available

SECTION 11: TOXICOLOGICAL INFORMATION

Precaution

Due to lack of data the classification is not possible.

SECTION 12: ECOLOGICAL INFORMATION

Precaution

Due to lack of data the classification is not possible.

CHLORHEXIDINE GLUCONATE:

EC50: 48 Hr: Crustacea (Daphnia magna): (mg/L): 0.045
LC50: 96 Hr: Fish: (mg/L): Not available
IC50: 72 Hr: Algae: (mg/L): Not available

CHLORHEXIDINE GLUCONATE SOLUTION (20%)*:

EC50: 48 Hr: Crustacea (Daphnia magna): (mg/L): 0.225
LC50: 96 Hr: Fish: (mg/L): Not available
IC50: 72 Hr: Algae: (mg/L): Not available

*Values for mixture are calculated based on known values for toxicity of the components.

SECTION 13: DISPOSAL CONSIDERATIONS

Precaution

Dispose of in accordance with federal / local laws and regulations. Avoid release into the environment.

Last Revision: 04/2017
SECTION 14: TRANSPORT INFORMATION

UNITED STATES & CANADA
UN PROPER SHIPPING NAME  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
UN NUMBER  3082
CLASS  9
PACKING GROUP  III

AUSTRALIA
UN PROPER SHIPPING NAME  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
UN NUMBER  3082
CLASS  9
PACKING GROUP  III
HAZCHEM  2Z

ENVIRONMENTAL HAZARDS  Not available
SPECIAL SHIPPING INFORMATION  Not applicable

SECTION 15: REGULATORY INFORMATION

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHLORHEXIDINE GLUCONATE 18472-51-0</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
<td>N/L</td>
</tr>
</tbody>
</table>

N/L = Not Listed; X = Listed

AUSTRALIAN REGULATIONS

<table>
<thead>
<tr>
<th>Chemical Name &amp; CAS</th>
<th>Poisons and Therapeutic Goods Regulation</th>
<th>Therapeutic Goods Act</th>
<th>Code of Practices - Illicit Drug Precursors</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHLORHEXIDINE GLUCONATE 18472-51-0</td>
<td>N/L</td>
<td>Listed as Schedule 7*</td>
<td>N/L</td>
</tr>
</tbody>
</table>

NOTES  *Listed as the base

SECTION 16: OTHER INFORMATION

REFERENCES  Available upon request
ABBREVIATIONS AND ACRONYMS

CAS – Chemical Abstract Service; GHS – Global Harmonized System; OSHA PEL – Occupational Safety & Health Administration Permissible Exposure Limits; TWA – Time Weighted Average; HSIS – Hazardous Substances Information System; STEL – Short Term Exposure Limit; AIHA WEEL – American Industrial Hygiene Association Workplace Environment Exposure Levels; LD50 – Lethal Dose, 50%; IARC – International Agency for Research on Cancer; NTP – National Toxicology Program; WHMIS – Workplace Hazardous Materials Information System; SARA – Superfund Amendments and Reauthorization Act; EPA – Environmental Protection Agency; CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act; HMDIS – Hazardous Materials Information System; NIOSH – National Institute for Occupational Safety and Health; MSHA - Mine Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; IDHL - Immediately Dangerous to Health or Life; TLV – Threshold Limit Value; HSE – Health and Safety Executive; REL - Recommended Exposure Limit

LAST REVISION

04/2017

SUPERSEDES

03/2017

DISCLAIMER

This document was created in accordance with OSHA, Safe Work Australia and WHMIS regulations. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDISCA® shall not be held liable for any damage resulting from handling or from contact with the above product. Recipients of the product must take responsibility for observing existing laws and regulations.