**MATERIAL SAFETY DATA SHEET**

**Aplicare Antiseptic Gel Handrinse**

### Section I

**IDENTITY (As Used on Label and List)**

<table>
<thead>
<tr>
<th>Unstable</th>
<th>Conditions to Avoid</th>
<th>Keep away from heat or ignition source.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Section II

**Hazardous Ingredients/Identity Information**

<table>
<thead>
<tr>
<th>Hazardous Components (Specific Chemical Identity; Common Names(s))</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
<th>% (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol (Specially Denatured Alcohol 40-2)</td>
<td>N/A</td>
<td>1000 PPM</td>
<td>NONE</td>
<td>62 v/v</td>
</tr>
</tbody>
</table>

**Health Hazards (Acute/Chronic)**

- Eye irritation, drowsiness. Primary skin irritation index of 0.00, classifies this product as non-irritative and not a primary irritant to the skin since the empirical score was less than 5.00.

**Carcinogenicity:**

- NTP: Not evaluated
- IARC Monographs: Not evaluated
- OSHA Regulated: Not evaluated

**Signs and Symptoms of Exposure**

- This liquid cleanser may cause eyes to have redness, tearing, or irritation.

**Medical Conditions**

- Generally Aggravated by Exposure: No medical conditions are known or suspected to be aggravated.

**Emergency and First Aid Procedures**

- Eyes: Flush with water. Skin: If irritation develops, discontinue use and treat symptoms.
- Ingestion: Give a tablespoon of salt in a glass of water and repeat until vomit fluid is clear. Seek medical attention.

### Section III

**Physical/Chemical Characteristics**

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Specific Gravity (Water = 1)</th>
<th>173°F</th>
<th>0.904</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure (mm Hg.)</td>
<td>Melting Point</td>
<td>40</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density (AIR = 1)</td>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>1.59</td>
<td>2.8</td>
</tr>
</tbody>
</table>

**Solubility in Water**

- Complete

**Appearance and Odor**

- A clear, green, viscous liquid with an alcohol odor.

### Section IV

**Fire and Explosion Hazard Data**

<table>
<thead>
<tr>
<th>Flash Point (Method Used)</th>
<th>Flammable Limits</th>
<th>LEL</th>
<th>UEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>60°F (Closed Cup)</td>
<td>Flammable</td>
<td>3.3</td>
<td>19%</td>
</tr>
</tbody>
</table>

**Extinguishing Media**

- No recommendations or restrictions for this product.

**Special Firefighting Procedures**

- No special firefighting procedures are indicated.

**Unusual Fire and Explosion Hazards**

- Vapors may form, travel and ignite.

### Section VII

**Precautions for Safe Handling and Use**

**Respiratory Protection (Specify Type)**

- No personal protective equipment needed.

**Ventilation**

- Local Exhaust: N/A
- Special: N/A

**Other Precautions**

- Protective Gloves: N/A
- Eye Protection: N/A

**Work/Hygienic Practices**

- N/A

### Section VIII

**CONTROL MEASURES**

**Respiratory Protection (Specify Type)**

- No personal protective equipment needed.

**Ventilation**

- Local Exhaust: N/A
- Special: N/A

**Other Protective Clothing or Equipment**

- N/A
MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Chloraprep 2.0%
Formula: Mixture
MSDS Date of Preparation: November 21, 2008

CARDINAL HEALTH, INC.
11400 Tomahawk Creek Pkwy
Leawood, KS 66211
PHONE: (800) 523-0502 FAX: (913) 451-8509

EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 Commercial #1 (703) 741-6009
• This number to be used only for spills, leaks, fire, exposure or accidents. Please direct all other inquiries to Cardinal Health Customer Service at (800) 523-0502.

2. HAZARDS IDENTIFICATION

This product consists of a 70% isopropanol and 2% chlorhexidine gluconate solution.

EMERGENCY OVERVIEW

WARNING!
Flammable Liquid and Vapor. Causes severe eye irritation. May cause skin irritation. Inhalation of vapors may cause respiratory irritation and central nervous system effects such as headache, dizziness, drowsiness, nausea and unconsciousness. Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (Isopropyl Alcohol)</td>
<td>67-63-0</td>
<td>70%</td>
</tr>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>18472-51-0</td>
<td>2%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Skin: Wash material off the skin with copious amounts of water. If redness or a burning sensation develops, seek medical attention and discontinue use.

Eyes: Flush with copious amounts of water. After initial flushing remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel immediately.

Ingestion: Give individual one to two glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person)
Inhalation: If symptoms of exposure develop, move to fresh air. Seek medical attention if symptoms persist.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water fog, alcohol-resistant foam, carbon dioxide or dry chemical. Water spray can be used to cool exposed containers and structures, dilute spills and disperse flammable vapors. Special Fire Fighting Procedures: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Unusual Fire & Explosion Hazards: Primary solution containment may explode if exposed to extreme heat or flame. Vapors are heavier than air and will travel along surfaces to remote ignition sources and flash back.

6. ACCIDENTAL RELEASE MEASURES

For small spills, wipe or mop up and rinse to sewer serviced by a wastewater treatment facility. For large spills, eliminate sources of ignition and ventilate spill area. Wear skin, eye and respiratory protection during cleanup (See Section 8). Soak up liquid with inert absorbent and collect into a suitable waste container. Wash residue from spill area with water and flush to sewer serviced by a wastewater treatment facility if permitted.

7. HANDLING AND STORAGE

Avoid prolonged exposure (ingestion, inhalation, or skin). Avoid breathing vapors. Use in well ventilated areas. Keep product away from heat, sparks and flames.

Store in a cool, dry, well-ventilated area away from incompatible chemicals and all sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Exposure Guidelines:                        | \n|--------------------------------------------|
| Isopropanol (Isopropyl Alcohol)            | 400 ppm PEL-TWA |
|                                           | 200 ppm TLV-TWA |
|                                           | 400 ppm TWA-STEPL |
| Chlorhexidine Gluconate                    | None Established |
Eye Protection: Avoid eye contact. Safety glasses or goggles recommended if eye contact is possible.
Gloves: Latex rubber for limited contact. Butyl rubber or nitrile recommended for prolonged contact.
Respiratory Protection: If the exposure limits are exceeded a NIOSH approved organic vapor respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.
Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point:</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>Complete</td>
</tr>
<tr>
<td>pH</td>
<td>7.0 – 7.5</td>
</tr>
<tr>
<td>Flammable Limits:</td>
<td>LEL: 2.0% (isopropanol)</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>Unknown</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>0.880</td>
</tr>
<tr>
<td>% Volatile by volume:</td>
<td>100</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Unknown</td>
</tr>
<tr>
<td>Flash point:</td>
<td>67° F TCC</td>
</tr>
<tr>
<td>Appearance &amp; Odor:</td>
<td>Product is a liquid with an alcohol odor as applied.</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable
Incompatibility: Oxidizing materials
Hazardous polymerization: Will not occur.
Hazardous decomposition products: Carbon dioxide, carbon monoxide, nitrogen oxides, ammonia, chlorine compounds.
Conditions to avoid: Extreme heat, sparks or flame.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:
Ingestion: Ingestion may cause mucous membrane and gastrointestinal irritation, abdominal pain, nausea, vomiting, dizziness and drowsiness.
Inhalation: Inhalation of vapors may cause mucous membrane and respiratory irritation and central nervous system depression with symptoms of headache, dizziness and drowsiness.
Eye: Contact may cause severe irritation with redness, tearing and pain with possible eye damage.
Skin: May cause irritation, drying, defatting of the skin. Prolonged contact may cause dermatitis.
Chronic: None known.
Carcinogenicity: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.
Medical Conditions Aggravated by Exposure: Employees with pre-existing skin, kidney and respiratory diseases may be at increased risk from exposure.
Acute Toxicity Values:
Isopropanol: Oral Rat LD50 5,045 mg/kg; Inhalation Rat LC50 16,000 ppm/8 hour; Skin Rabbit LD50 12,800 mg/kg
Chlorhexidine Gluconate: Oral Rat LD50 2,000 mg/kg

12. ECOLOGICAL INFORMATION

Isopropanol: The LC50/96-hour values for fish are over 100 mg/l.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

14. TRANSPORT INFORMATION

DOT Information

Proper Shipping Name: Isopropanol Solution
Hazard Class: 3, PG II
UN Number: UN1219
Exemption for US Ground Transport: Consumer Commodity, ORM-D
Exemption for US Air Transport: Consumer Commodity, ORM-D-AIR
Small Quantity Exception: 49CFR173.4

IMO Information

Proper Shipping Name: Isopropanol Solution
Hazard Class: 3, PG II
UN Number: UN1219
Limited Quantity: 1 L/inner receptacle. Limit gross weight - 30 kg/package

IATA Information

Proper Shipping Name: Isopropanol Solution
Hazard Class: 3, PG II
UN Number: UN1219
Packing Instruction: 305
Limited Quantity Packing Instruction: Y305
Alternate Shipping Description: Consumer Commodity, 9, ID8000
Excepted Small Quantities of Dangerous Goods: Class 3, PG II inner limit 30 mL, Outer Package Limit 500 mL
15. REGULATORY INFORMATION

CERCLA: This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

16. OTHER INFORMATION

HMIS Rating: Health = 2  Fire = 3  Reactivity = 0

ACGIH: American Conference of Governmental Industrial Hygienists
IARC: International Agency for Research on Cancer
OSHA: Occupational Safety and Health Administration
NTP: National Toxicology Program
PEL: Permissible exposure Level (OSHA)
TLV: Threshold Limit Value (ACGIH)
TWA: Time Weighted Average over 8 hours
TCC: Tagged Closed Cup

---

<table>
<thead>
<tr>
<th>REVISION SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAF NUMBER</td>
</tr>
<tr>
<td>REVISION</td>
</tr>
<tr>
<td>DATE</td>
</tr>
<tr>
<td>SUMMARY OF CHANGE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REVISION SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAF NUMBER</td>
</tr>
<tr>
<td>REVISION</td>
</tr>
<tr>
<td>DATE</td>
</tr>
<tr>
<td>SUMMARY OF CHANGE</td>
</tr>
</tbody>
</table>

To view remaining history – See Rev. J.
### Section I - Manufacture's Name

**Manufacture's Name:** Aplicare, Inc.  
**Emergency Telephone Number:** Chemtrek (800) 424-9300  
**Address:** 550 Research Parkway, Meriden, CT 06450  
**Date Prepared:** December 18, 2009  
**Signature of Preparer (optional):** 

### Section II - Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>% (optional)</th>
<th>Route(s) of Entry:</th>
<th>Ingestion?</th>
<th>Inhalation?</th>
<th>Skin?</th>
<th>Other Limits</th>
<th>Route(s) of Entry:</th>
<th>Ingestion?</th>
<th>Inhalation?</th>
<th>Skin?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol (CAS #67-63-0)</td>
<td>400 ppm</td>
<td>70</td>
<td></td>
<td>Eyes?</td>
<td>N/A</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section III - Physical/Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>176°F</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1)</td>
<td>0.878</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg.)</td>
<td>Approx. 90</td>
</tr>
<tr>
<td>Vapor Density (AIR = 1)</td>
<td>2.1</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>A clear, colorless liquid with a pungent, alcohol odor.</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble.</td>
</tr>
</tbody>
</table>

### Section IV - Fire and Explosion Hazard Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (Method Used)</td>
<td>53 F (Closed cup)</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>LEL 2 UEL 12</td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Dry chemical or alcohol-type foam</td>
</tr>
<tr>
<td>Special Fire-Fighting Procedures</td>
<td>Use water to cool fire-exposed area. Water spray may be ineffective in fighting fires.</td>
</tr>
<tr>
<td>Unusual Fire and Explosion Hazards</td>
<td>Respiratory protection required for fire fighting personnel. Stay upwind if possible.</td>
</tr>
</tbody>
</table>

### Section V - Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstable</td>
<td>None known.</td>
</tr>
<tr>
<td>Stable</td>
<td></td>
</tr>
</tbody>
</table>

### Section VI - Health Hazard Data

<table>
<thead>
<tr>
<th>Route(s) of Entry</th>
<th>Ingestion?</th>
<th>Inhalation?</th>
<th>Skin?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes?</td>
<td>N/A</td>
<td>X</td>
<td>x</td>
</tr>
</tbody>
</table>

### Section VII - Precautions for Safe Handling and Use

#### Steps to Be Taken in Case Materials is Released or Spilled

- Steps to Be Taken in Case Materials is Released or Spilled: It is unlikely that this product, when spilled, will cause a problem; packaged as individual packets containing 2 - 8 mL of solution.

#### Precautions to Be Taken in Handling and Storing

- Precautions to Be Taken in Handling and Storing: Avoid storing in excessive heat (Greater than 104°F).

#### Special Fire-Fighting Procedures

- Special Fire-Fighting Procedures: Use water to cool fire-exposed area. Water spray may be ineffective in fighting fires.

#### Other Precautions

- Other Precautions: None.

### SECTION VIII - CONTROL MEASURES

#### Respiratory Protection (Specify Type)

- Respiratory Protection: No personal protective equipment needed.

#### Ventilation

- Local Exhaust: X
- Special: N/A

#### Protective Gloves

- Mechanical (General): N/A
- Other: N/A

#### Other Protective Clothing or Equipment

- None required.

#### Work/Hygienic Practices

- Normal
MATERIAL SAFETY DATA SHEET

Aplicare Skin Protectant Swabstick

IDENTITY (As Used on Label and List)

Section I

Manufacture's Name: Aplicare, Inc.

Emergency Telephone Number: Chemtrek (800) 424-9300

Address (Number, Street, City, and ZIP Code): 550 Research Parkway, Meriden, CT 06450

Date Prepared: December 15, 2006

Signature of Preparer (optional):

Section II -- Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Names(s)): Isopropyl Alcohol (CAS #67-63-0), n-Butyl Alcohol (CAS #71-36-3)

OSHA PEL: 400 ppm, 100 ppm

ACGIH TLV: 76.4, 6.1

Route(s) of Entry: Eyes? Inhalation? Skin? Ingestion?: Eyes? Inhalation? Skin? Ingestion?

Health Hazards (Acute/Chronic): Can be irritating to eyes, nose and throat. May cause dermatitis in some individuals after prolonged exposure.

Medical Conditions: Unknown

Emergency and First Aid Procedures:
- Eyes: Flush with plenty of water and see a doctor.
- Ingestion: Induce vomiting.

Section III -- Physical/Chemical Characteristics

Boiling Point (Isopropanol): 176°F

Specific Gravity (Water = 1): 0.852

Vapor Pressure (mm Hg.) (Isopropanol): N/A

Vapor Density (AIR = 1) (Isopropanol): 2.1

Evaporation Rate (Butyl Acetate = 1): Unknown

Solubility in Water: Soluble

Appearance and Odor: A clear, colorless liquid with a pungent, alcohol odor.

Section IV -- Fire and Explosion Hazard Data

Flash Point (Method Used): <74°F (Closed cup)

Flammable Limits: LEL 2, UEL 12

Steps to Be taken in Case Materials is Released or Spilled: Steps to Be taken in Case Materials is Released or Spilled

Extinguishing Media: Steps to Be taken in Case Materials is Released or Spilled

Special Fire Fighting Procedures: Use water to cool fire-exposed area. Water spray may be ineffective in fighting fires.

Other Precautions:

Special Fire Fighting Procedures:

Respiratory protection required for fire fighting personnel. Stay upwind if possible.

Vapors may form, travel and ignite.

Section V -- Reactivity Data

Stability: Stable

Conditions to Avoid: None known.

Incompatibility (Materials to Avoid): None known.

Hazardous Decomposition of Byproducts: Burning may produce carbon monoxide and carbon dioxide.

Section VI -- Health Hazard Data

Route(s) of Entry: Eyes? Inhalation? Skin? Ingestion?: Eyes? Inhalation? Skin? Ingestion?: None

Health Hazards (Acute/Chronic): Can be irritating to eyes, nose and throat. May cause dermatitis in some individuals after prolonged exposure.

Medical Conditions: Unknown

Emergency and First Aid Procedures:
- Eyes: Flush with plenty of water and see a doctor.
- Ingestion: Induce vomiting.

Section VII -- Precautions for Safe Handling and Use

Respiratory Protection (Specify Type): No personal protective equipment needed.

Ventilation: Local Exhaust

Protective Gloves: If desired

Protective Clothing or Equipment: If desired

Work/Hygienic Practices: Normal

Section VIII -- CONTROL MEASURES

Steps to Be taken in Case Materials is Released or Spilled:

Extinguishing Media:

Special Fire Fighting Procedures:

Respiratory protection required for fire fighting personnel. Stay upwind if possible.

Vapors may form, travel and ignite.