1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Pfizer Inc
Pfizer Pharmaceuticals Group
235 East 42nd Street
New York, New York 10017
1-212-573-2222

Pfizer Ltd
Ramsgate Road
Sandwich, Kent
CT13 9NJ
United Kingdom
+00 44 (0)1304 616161

Emergency telephone number:
CHEMTREC (24 hours): 1-800-424-9300
Contact E-Mail: pfizer-MSDS@pfizer.com

Material Name: Chlorhexidine in Alcohol 70%

| Trade Name: | Not applicable |
| Chemical Family: | Mixture |
| Intended Use: | Pharmaceutical product used as antiseptic, disinfectant |

2. HAZARDS IDENTIFICATION

Appearance: Red liquid
Signal Word: WARNING

Statement of Hazard:
Flammable liquid and vapor.
Causes severe eye irritation.
May cause drowsiness or dizziness.

Additional Hazard Information:
Short Term: May cause mild skin irritation (based on animal data). Exposure to high concentrations of gas, vapor, or mist may cause irritation.
Long Term: Chronic ingestion of ethanol has been associated with an increased incidence of cancer, liver cirrhosis, and, if ingested during pregnancy, congenital malformations.
EU Indication of danger:
Flammable

EU Hazard Symbols:

EU Risk Phrases:
R11 - Highly flammable.

Australian Hazard Classification (NOHSC):
Dangerous Goods. Hazardous Substance.
2. HAZARDS IDENTIFICATION

Note: This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the active substance or its intermediates regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS/ELINCS List</th>
<th>EU Classification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td>F;R11</td>
<td>60-100</td>
</tr>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>18472-51-0</td>
<td>242-354-0</td>
<td>Xn;R22</td>
<td>0.5</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td>Not Listed</td>
<td>*</td>
</tr>
<tr>
<td>Carmoisine red E122</td>
<td>3567-69-9</td>
<td>222-657-4</td>
<td>Not Listed</td>
<td>*</td>
</tr>
<tr>
<td>Amaranth</td>
<td>915-67-3</td>
<td>213-022-2</td>
<td>Not Listed</td>
<td>*</td>
</tr>
</tbody>
</table>

Additional Information: * Proprietary

Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.

For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Eye Contact: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.

Skin Contact: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.

Inhalation: Remove to fresh air and keep patient at rest. Seek medical attention immediately.

Symptoms and Effects of Exposure: For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical or foam.

Hazardous Combustion Products: Formation of toxic gases is possible during heating or fire. May include oxides of carbon, nitrogen and products of chlorine.

Fire Fighting Procedures: During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.
Fire / Explosion Hazards: Flammable liquid and vapor. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6. ACCIDENTAL RELEASE MEASURES

Health and Safety Precautions: Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure. Eliminate all sources of ignition and ventilate area using explosion-proof equipment.

Measures for Cleaning / Collecting: Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly.

Measures for Environmental Protections: Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Additional Consideration for Large Spills: Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

General Handling: Use only in a well-ventilated area. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash thoroughly after handling. Keep away from heat, sparks, flame and all other sources of ignition. Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Storage Conditions: Store in a cool, dry, well-ventilated area. Keep away from heat, sparks, flame, and other sources of ignition. Keep container tightly closed when not in use.

Storage Temperature: Store as directed by product packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to available public information for specific member state Occupational Exposure Limits.

ETHANOL

<table>
<thead>
<tr>
<th>Country</th>
<th>OEL - TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1000 ppm</td>
<td>1880 mg/m³</td>
</tr>
<tr>
<td>Austria OEL - MAKs</td>
<td>1000 ppm</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>Belgium OEL - TWA</td>
<td>1000 ppm</td>
<td>1907 mg/m³</td>
</tr>
<tr>
<td>Bulgaria OEL - TWA</td>
<td>1000 ppm</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>Czech Republic OEL - TWA</td>
<td>1000 ppm</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>Denmark OEL - TWA</td>
<td>1000 ppm</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>Estonia OEL - TWA</td>
<td>500 ppm</td>
<td>1000 mg/m³</td>
</tr>
<tr>
<td>Finland OEL - TWA</td>
<td>1000 ppm</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>France OEL - TWA</td>
<td>1000 ppm</td>
<td>1900 mg/m³</td>
</tr>
</tbody>
</table>

ACGIH Threshold Limit Value (STEL) 1000 ppm

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Material Name: Chlorhexidine in Alcohol 70% Version: 2.0
Revision date: 27-Jul-2012
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:
Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limits listed above in this section.

Environmental Exposure Controls:
Refer to specific Member State legislation for requirements under Community environmental legislation.

Personal Protective Equipment:
Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE).

Hands: Wear impervious gloves.
Eyes: Wear safety glasses or goggles if eye contact is possible.
Skin: Wear protective clothing when working with large quantities.
Respiratory protection: If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

Chlorhexidine Gluconate

Pfizer Occupational Exposure Band (OEB):
OEB 4 (control exposure to the range of 1μg/m³ to <10μg/m³)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Odor: Alcohol
Molecular Weight: Mixture

Water Solubility: Soluble
Boiling Point (°C): 78.5 based on major component Ethanol
Vapor Pressure (kPa): 7.91 (Ethanol)
9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Density (g/ml): 1.59 (Ethanol)

Flash Point (Liquid) (°C): 12.8 Open cup based on major component (Ethanol)
Upper Explosive Limits (Liquid) (% by Vol.): 19
Lower Explosive Limits (Liquid) (% by Vol.): 3.3
Polymerization: Will not occur

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of use.
Conditions to Avoid: Keep away from heat, spark, flames and all other sources of ignition.
Incompatible Materials: Strong oxidizing agents and strong inorganic acids

11. TOXICOLOGICAL INFORMATION

General Information: There are no data for this formulation. The information included in this section describes the potential hazards of the individual ingredients.

Acute Toxicity: (Species, Route, End Point, Dose)

**ETHANOL**

<table>
<thead>
<tr>
<th>Species</th>
<th>Route</th>
<th>End Point</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>Oral</td>
<td>LD 50</td>
<td>7060 mg/kg</td>
</tr>
<tr>
<td>Mouse</td>
<td>Oral</td>
<td>LD 50</td>
<td>3450 mg/kg</td>
</tr>
<tr>
<td>Rat</td>
<td>Inhalation</td>
<td>LC 50</td>
<td>20000 ppm/10H</td>
</tr>
<tr>
<td>Mouse</td>
<td>Inhalation</td>
<td>LC 50</td>
<td>39 gm/m²/3h</td>
</tr>
</tbody>
</table>

**Chlorhexidine Gluconate**

<table>
<thead>
<tr>
<th>Species</th>
<th>Route</th>
<th>End Point</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>Oral</td>
<td>LD50</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td>Rat</td>
<td>Para-periosteal</td>
<td>LD50</td>
<td>24.2 mg/kg</td>
</tr>
<tr>
<td>Mouse</td>
<td>Oral</td>
<td>LD50</td>
<td>1260 mg/kg</td>
</tr>
<tr>
<td>Mouse</td>
<td>Intravenous</td>
<td>LD50</td>
<td>12.9 mg/kg</td>
</tr>
</tbody>
</table>

Irritation / Sensitization: (Study Type, Species, Severity)

**ETHANOL**

- Eye Irritation: Rabbit Severe
- Skin Irritation: Rabbit Mild

**Chlorhexidine Gluconate**

- Eye Irritation: Rabbit Moderate

Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))

**Chlorhexidine Gluconate**

Embryo / Fetal Development: Rat Oral 68 mg/kg/day NOAEL Not teratogenic

Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

**Chlorhexidine Gluconate**

- In Vivo Cytogenetics: Hamster Negative
- In Vivo Dominant Lethal Assay: Mouse Negative
11. TOXICOLOGICAL INFORMATION

Carcinogen Status: None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

ETHANOL
  IARC: Group 1 (Carcinogenic to Humans)
  OSHA: Listed

Amaranth
  IARC: Group 3 (Not Classifiable)

Carmoisine red E122
  IARC: Group 3 (Not Classifiable)

12. ECOLOGICAL INFORMATION

Environmental Overview: The environmental characteristics of this mixture have not been fully evaluated. Releases to the environment should be avoided.

Aquatic Toxicity: (Species, Method, End Point, Duration, Result)

ETHANOL
  Oncorhynchus mykiss (Rainbow Trout) NPDES LC-50 96 Hours 12900 mg/L
  Fingerling Trout NPDES LC-50 24 Hours 11200 mg/L
  Fathead Minnow NPDES LC-50 96 Hours 14200 mg/L

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

This material is regulated for transport under DOT, ADR, IMDG, and IATA regulations.

UN number: UN 1170
UN proper shipping name: Ethanol solution
Transport hazard class(es): 3
Packing group: II
Flash Point (°C): 12.8
15. REGULATORY INFORMATION

EU Symbol: F
EU Indication of danger: Flammable
EU Risk Phrases: R11 - Highly flammable.

EU Safety Phrases:
S 2 - Keep out of the reach of children.
S 7 - Keep container tightly closed.
S16 - Keep away from sources of ignition - No smoking.
S25 - Avoid contact with eyes.

OSHA Label:
WARNING
Flammable liquid and vapor.
Causes severe eye irritation.
May cause drowsiness or dizziness.

Canada - WHMIS: Classifications
WHMIS hazard class:
Class B, Division 2
Class D, Division 2, Subdivision B

Water
- Inventory - United States TSCA - Sect. 8(b): Present
- Australia (AICS): Present
- REACH - Annex IV - Exemptions from the obligations of Register:
- EU EINECS/ELINCS List: 231-791-2

Carmoisine red E122
- Inventory - United States TSCA - Sect. 8(b): Present
- Australia (AICS): Present
- EU EINECS/ELINCS List: 222-657-4

Amaranth
- Inventory - United States TSCA - Sect. 8(b): Present
- Australia (AICS): Present
- EU EINECS/ELINCS List: 213-022-2

ETHANOL
15. REGULATORY INFORMATION

California Proposition 65
- carcinogen initial date 4/29/11
- developmental toxicity initial date 10/1/87

Inventory - United States TSCA - Sect. 8(b)
- Present

Australia (AICS):
- Present

EU EINECS/ELINCS List
- 200-578-6

Chlorhexidine Gluconate

Inventory - United States TSCA - Sect. 8(b)
- Present

Australia (AICS):
- Present

EU EINECS/ELINCS List
- 242-354-0

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3

R11 - Highly flammable.
R22 - Harmful if swallowed.

Data Sources:
- Publicly available toxicity information.

Reasons for Revision:
- Updated Section 7 - Handling and Storage. Updated Section 14 - Transport Information.

Prepared by:
- Pfizer Global Environment, Health, and Safety Operations

Pfizer Inc believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time.

End of Safety Data Sheet