1. Identification of the Product and Company

Product Name: D’fend Hospital Concentrate
Product Code: CDA
Other names: Chlorhexidine Gluconate and Cetrimide concentrate solution.
Use: To clean and disinfect equipments.
Company Name & Contact Details:
- Dishman Pharmaceutical & Chemical Ltd.
  - Bhadr-raj chambers, Swastik Cross Roads, Navrangpura, Ahmedabad, India
  - Tel: +91 (0) 79 26443053
  - Fax: +91 (0) 79 26420198
- Dishman Pharmaceutical & Chemical Ltd.
  - Survey No. 47, Paiki Sub Plot No. 1, Vill. : Lodariyal, Tal. : Sanand, Dist. : Ahmedabad – 382220 (India)
  - Tel: +91 (0) 2717 287192-94
  - Fax: +91 (0) 2717 287195

2. Hazards Identification

Hazard classification:
- NON-HAZARDOUS PRODUCT
- NON-DANGEROUS GOODS

Risk Phrases(s):
- None under normal operation conditions.
- May cause eye and skin irritation. May be harmful if swallowed.

Safety Phrases:
- S39 : Wear eye/face protection.
- S26: In case of contact with eyes rinse immediately with plenty of water & seek medical advice.

3. Composition/Information on ingredients

<table>
<thead>
<tr>
<th>Chemical Entity</th>
<th>CAS No.</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt;30%</td>
</tr>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>18472-51-0</td>
<td>1.5%</td>
</tr>
<tr>
<td>Strong Cetrimide Solution</td>
<td>8044-71-1</td>
<td>15%</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>0 – 10%</td>
</tr>
<tr>
<td>Dye</td>
<td></td>
<td>0 – 10%</td>
</tr>
</tbody>
</table>
4. First Aid Measures

Inhalation If fumes or combustion products are inhaled remove to fresh air and keep patient at rest. Seek medical attention immediately.

Ingestion If material is swallowed, get medical attention or advice. If swallowed do not induce vomiting. Give water to rinse out mouth, the provide liquid slowly and as much as casualty can comfortably drink.

Skin No adverse effects anticipated from normal use. Concentrate and diluted solution is readily removed with water. Seek medical attention in event of irritation.

Eyes If this product comes in contact with the eyes, wash out immediately with fresh running water. If pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Advice to Doctor Treat symptomatically. If respiration is depressed, assisted respiration may be necessary.

5. Fire Fighting Measures

Specific Hazards There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Extinguishing Media Dry chemical, foam, carbon dioxide, water fog.

Hazard from Combustion Products On thermal decomposition: oxides of carbon, nitrogen oxides (Nox), chloride, hydrogen bromide and other pyrolysis products typical of burning organic material.

Precautions & Equipments for Fire Fighters Fire fighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

HazChem Code None.

6. Accidental Release Measures

Spills and Disposal Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. In case of large spills, wear
protective clothing to prevent skin & eye contact and inhalation of vapors. Contain & absorb using inert material such as sand, earth, vermiculite where appropriate. Collect and seal in properly labeled containers for disposal. Wash area down with excess water.

7. Handling and Storage

Safe handling practices
Wash thoroughly after handling. Use in well-ventilated area. Avoid eye contact and prolonged inhalation of vapors. When handling do not eat, drink or smoke. Avoid physical damage to containers. Use good occupational work practice.

Storage
Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks.

8. Exposure Controls; Personal Protection

Exposure limits
There are no known exposure limits for this product but the following Threshold limit values (TLV) for isopropyl alcohol should be used:
Isopropyl alcohol [67-63-0]:
TLV : 400ppm (983 mg/m³)TWA.
ACGIH : 200ppm TWA & 400ppm STEL.
OSHA : 400ppm TWA & 980 983 mg/m³ TWA.
The following materials had no OELs on our records.
Chlorhexidine gluconate : CAS : 18472-51-0
Strong cetrimide solution : CAS : 8044-71-1
Water : CAS : 7732-18-5

Engineering Controls
General exhaust is adequate under normal operating conditions. Correct fit is essential to obtain adequate protection. Provide adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Avoid creation of aerosols. Local and or mechanical (general) exhaust, fitted with flame and explosion proof electrical fittings.

Personal Protection
Obey reasonable safety precautions and practice good housekeeping.
9. Physical & Chemical Properties

**Appearance & Odour**
Orange coloured solution with characteristic odour.

**pH**
5.5 - 7.0

**Vapour Pressure**
Not available

**Vapour Density**
Not available

**Boiling Point**
Not available

**Freezing/Melting Point**
Not available

**Solubility**
Soluble in water.

**Specific Gravity / Density**
0.900 – 1.100 gm/ml

**Flash Point**
Not available

**Viscosity**
Not available

10. Chemical Stability & Reactivity Information

**Conditions Contributing to instability**
Stable under usual application conditions.

**Hazardous Polymerization**
Hazardous polymerization will not occur.

**Incompatible Materials**
Keep away from incompatible materials.

**Conditions to avoid**
High temperature.

**Hazardous Decomposition products**
On thermal decomposition oxides of carbon, nitrogen oxides (Nox), chloride, hydrogen bromide and other pyrolysis products typical of burning organic material.

11. Toxicological Information

**Inhalation**
Not normally a hazard due to non-volatile nature of product. The material is not thought to produce adverse health effects or irritation of the respiratory tract.

**Ingestion**
May be harmful if swallowed. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

**Skin**
May cause skin irritation. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the not considered to cause
## 12. Ecological Information

The environmental characteristic of this mixture have not been fully evaluated. Releases to the environment should be avoided. Do not discharge into sewer or waterways. Refer to data for ingredients, which follows:

### Persistence & Degradability:
No data available.

### Ecotoxicity (for Isopropyl Alcohol)
- **Fish:** Fathead Minnow: >1000 ppm; 96h; LC50_Daphnia: >1000 ppm; 96h; LC50
- **Fish:** Gold orfe: 8970-9280 ppm; 48h;

### Ecotoxicity (for Cetrimide)
The group of Alkyl trimethyl Ammonium Bromides contained in Cetrimide have been shown to be very toxic to aquatic organisms. Typical ranges of toxicity are:
- **LC50 96 hour, Fish:** <10 mg/L
- **IC50 72 hour, Algae:** <1 mg/L
- **EC50 96 hour, Bacteria:** <0.1 mg/L

### Ecotoxicity (for others)
No significant Ecotoxicity data identification in literature search for Chlorhexidine gluconate and water.

## 13. Disposal Considerations

### Disposal Methods & Containers:
Dispose of in a manner consistent with federal, state, and local regulations.
14. Transport Information

UN Number: Not regulated.
UN Proper Shipping Name: Not regulated for transport of dangerous goods.
DG Class & Subsidiary Risk: Not dangerous goods.
Packing Group: Not regulated.
HazChem Code: None

15. Regulatory Information

Not classified using the criteria in the Standard Uniform Schedule for Drugs and Poisons.

16. Other Information

Legal disclaimers: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. DISHMAN PHARMACEUTICALS & CHEMICALS LTD shall not be held liable for any damage from handling or from contact with the above product.