SAFETY DATA SHEET

1. Identification

Product Identifier: Akten® (lidocaine hydrochloride ophthalmic gel) 3.5%

Synonyms: Akten®; Lidocaine Hydrochloride Ophthalmic Gel; Lidocaine Hydrochloride; Lidocaine; Acetamide, 2-diethylamino)-N-(2,6-dimethylphenyl)-monohydrochloride; 2',6'-Acetoxylidide, 2-(diethylamino)-hydrochloride; 2-Diethylamino-N-(2,6-dimethylphenyl)acetamide hydrochloride; Lignocaine; Xylocaine.

National Drug Code (NDC): 17478-792-01

Recommended Use: Pharmaceutical.

Company: Akorn, Inc.
1925 West Field Court, Suite 300
Lake Forest, Illinois 60045

Contact Telephone: 1-800-932-5676

E mail: customer.service@akorn.com

Emergency Phone Number: CHEMTREC 1-800-424-9300 (U.S. and Canada)

2. Hazard(s) Identification

Physical Hazards: Not classifiable.

Health Hazards: Specific target organ toxicity – single exposure (narcotic effects) Category 3

Symbol(s):

Signal Word: Warning

Hazard Statement(s): H336 May cause drowsiness or dizziness.

Precautionary Statement(s): P261 Do not breathe mist/vapours/spray.

P271 Use in a well ventilated area.

P304 IFINHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.
Hazard Not Otherwise Classified: Not classifiable.

Supplementary Information: May be harmful if swallowed, in contact with the skin or inhaled. Lidocaine is well absorbed through mucous membranes, the gastrointestinal tract and damaged skin. Abdominal discomfort may occur after ingestion. Because Akten® is a local anesthetic, contact with the eyes or skin may cause temporary loss of feeling or sensation. May cause general hypotension, bradycardia, central nervous system depression, dizziness, blurred vision, tremors, drowsiness, convulsions, and/or unconsciousness. See product label and/or product insert for additional information.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Synonyms</th>
<th>Chemical Formula</th>
<th>Molecular Weight</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl)-monohydrochloride; 2',6’-Acetoxyldide, 2-(diethylamino)-hydrochloride</td>
<td>73-78-9</td>
<td>Lidocaine Hydrochloride; 2-Diethylamino-N-(2,6-dimethylphenyl)acetamide hydrochloride; Lidocaine; Lignocaine; Xylocaine</td>
<td>C14H22N2O·HCl</td>
<td>270.8</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Inactive ingredients: Hypromellose; Sodium Chloride; and Purified Water. pH may be adjusted with Sodium Hydroxide and/or Hydrochloric Acid.

4. First Aid Measures

Ingestion: If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Loosen tight clothing such as a collar, tie, belt or waistband. If swallowed, seek medical advice immediately and show the container or label. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Effects of exposure (ingestion) to substance may be delayed.

Eye Contact: Remove from source of exposure. Move individual(s) to fresh air. Check for and remove any contact lenses. Flush with copious amounts of water for at least 20 minutes. Effects of exposure may be delayed. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the
Skin Contact: Remove from source of exposure. Remove and isolate contaminated clothing and shoes. Flush with copious amounts of water for at least 20 minutes. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect to protect themselves.

Inhalation: Remove from source of exposure. Move individual(s) to fresh air. Give artificial respiration if individual(s) are not breathing and call emergency medical service. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Ensure that medical personnel are aware of the material(s) involved and are aware of precautions to protect to protect themselves.

Protection of First-Aiders: Use personal protective equipment (see section 8).

Signs and Symptoms: Abdominal discomfort if ingested; eye irritation, skin irritation, loss of feeling/sensation; respiratory irritation if inhaled. May cause hypersensitivity.

Medical Conditions Aggravated by Exposure: Pre-existing hypersensitivity to lidocaine or related amide-type anesthetics. Pre-existing nervous system, cardiovascular or hepatic ailments.

Notes to Physician: None.

5. **Firefighting Measures**

Suitable Extinguishing Media: Use extinguishing media for type of surrounding fire.

Unsuitable Extinguishing Media: Not determined.

**Specific Hazards Arising from the Chemical:**

**Hazardous Combustion Products:** These products include carbon oxides, nitrogen oxides and hydrogen chloride.

**Other Specific Hazards:** Closed containers may explode from the heat of fire.

**Special Protective Equipment Precautions for Firefighters:** Wear self-contained breathing apparatus and full and protective gear.

6. **Accidental Release Measures**

**Personal Precautions:** Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate personal protective equipment and clothing.

**Personal Protective Equipment:** For personal protection see section 8.
Method for Cleaning Up:
Dike ahead of liquid spills for later disposal. Absorb with inert material. Recover product and place in an appropriate container for disposal in accordance with local, state and federal regulations.

Environmental Precautions:
Contain material and prevent release to basements, confined spaces, waterways or soil.

Reference to Other Sections:
Refer to Sections 8, 12 and 13 for further information.

7. Handling and Storage

Precautions for Safe Handling:
Handle in accordance with product label and/or product insert information. Handle in accordance with good industrial hygiene and safety practices.

Conditions for Safe Storage, Including Any Incompatibilities:
Store according to label and/or product insert information. Store away from oxidizers, acids, bases and water reactive materials.

Specific End Use:
Pharmaceuticals.

8. Exposure Controls/Personal Protection

Occupational Exposure Guidelines:

<table>
<thead>
<tr>
<th>Common or Chemical Name</th>
<th>Employee Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidocaine Hydrochloride</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

Engineering Controls:
Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the contaminant at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials.

Respiratory Protection:
Where respirators are deemed necessary to reduce or control occupational exposures, use NIOSH-approved respiratory protection and have an effective respirator program in place (applicable U.S. regulation OSHA 29 CFR 1910.134).

Eyes:
Safety glasses with side shields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area.
Hand: Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic non-latex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

Skin: Protective laboratory coat, apron, or disposable garment.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State/Color</td>
<td>Semi-solid/Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5 to 7.5</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>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability Limit - Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability Limit - Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Miscible in water</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>(n-octanol/water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Reactive with water reactive materials.</td>
</tr>
<tr>
<td>Chemical Stability</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions</td>
<td>No data available.</td>
</tr>
<tr>
<td>Conditions to Avoid (e.g., static discharge, shock, or vibration)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Oxidizers, acids, bases and water reactive materials.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

11. Toxicological Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on the Likely Routes of Exposure:</td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. May cause respiratory tract irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>May be harmful if absorbed through the skin. May cause skin irritation.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>May cause eye irritation.</td>
</tr>
</tbody>
</table>

Symptoms Related to the Physical, Chemical and Toxicological: See Section 4. To the best of our knowledge, the chemical, physical and toxicological properties have not
Characteristics:  been thoroughly investigated.

Delayed and Immediate Effects of Exposure:  No data available.

Acute Toxicity – Oral:  \( \text{LD}_{50} \), Mouse: 220 to 292 mg/kg
\( \text{LD}_{50} \), Rat: 317 mg/kg

Acute Toxicity – Dermal:  No data available.
Acute Toxicity – Inhalation:  No data available.
Corrosivity:  No data available.
Dermal Irritation:  No data available.
Eye Irritation:  No data available.
Sensitization:  No data available.
Toxicokinetics/Metabolism:  No data available.
Target Organ Effects:  No data available.
Reproductive Effects:  No data available.

Carcinogenicity:
National Toxicology Program (NTP):  Not considered to be a carcinogen.
International Agency for Research on Cancer (IARC):  Not considered to be a carcinogen.
Occupational Safety and Health Administration (OSHA):  Not considered to be a carcinogen.

Mutagenicity:  No data available.
Aspiration Hazard:  No data available.

12. Ecological Information

Ecotoxicity
Aquatic:  No data available.
Terrestrial:  No data available.

Persistence and Degradability:  No data available.
Bioaccumulative Potential:  No data available.
Mobility in Soil:  No data available.
Other Adverse Effects:  No data available.

13. Disposal Considerations

Dispose of all waste in accordance with Federal, State and local regulations.

14. Transport Information

UN Number:  Not applicable.
UN Proper Shipping Name:  Not applicable.
Transport Hazard Class(es):  Not applicable.
Packing Group:  Not applicable.
DOT:  Not regulated as a hazardous material.
15. Regulatory Information

**US Federal Regulations:**
- **TSCA Inventory:** This product is a drug regulated by the Food and Drug Administration (FDA), and is not regulated by TSCA.
- **CERCLA Hazardous Substance and Reportable Quantity:** Not listed.
- **SARA 313:** Not listed.
- **SARA 302:** Not listed.

**State Regulations**
- **Massachusetts:** Not listed.
- **New Jersey:** Lidocaine hydrochloride.
- **Pennsylvania:** Lidocaine hydrochloride.
- **California Proposition 65:** Not listed.

16. Other Information

Not made with natural rubber latex.

**NFPA Rating:** (Lidocaine Hydrochloride)
- Health: 2
- Flammability: 0
- Reactivity: 0

**HMIS Classification:** (Lidocaine Hydrochloride)
- Health: 2
- Flammability: 0
- Physical Hazard: 0

**Revision Date:** 07/15/2014

**Revision Number:** 1

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