MATERIAL SAFETY DATA SHEET
Citanest® Plain Dental (prilocaine hydrochloride injection, USP)

MSDS-015-CITANEST PLAIN-US REV.00, November 2014

DENTSPLY International
DENTSPLY Pharmaceutical

Safety Data Sheet


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

1.1 Product Identifier:

  Trade Name (as labeled): Citanest® Plain Dental (prilocaine hydrochloride injection, USP)

  Part/Item Number(s): 46616

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:

  Recommended Use: Local anesthetic solution for use in peripheral nerve blocks

  Restrictions on Use: For Professional Use Only

1.3 Details of the Supplier of the Safety Data Sheet:

  Manufacturer/Supplier Name: DENTSPLY Pharmaceutical

  Manufacturer/Supplier Address: 1301 Smile Way

  York, PA 17404

  Manufacturer/Supplier Telephone Number: 1-800-989-8825

  Email address: webmaster@dentsply.com

1.4 Emergency Telephone Number:

  Please report all incidents to the company contacts listed above.

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture:

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Health</th>
<th>Environmental</th>
<th>Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Hazardous</td>
<td>Not Hazardous</td>
<td>Not Hazardous</td>
</tr>
</tbody>
</table>

EU Classification: Not classified as dangerous

2.2 Label Elements:

None Required
2.3 Other Hazards: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture:

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>C.A.S. #</th>
<th>EINECS #</th>
<th>Classification</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hazardous ingredients</td>
<td>Mixture</td>
<td>Mixture</td>
<td>Not Hazardous</td>
<td>96</td>
</tr>
<tr>
<td>Prilocaine Hydrochloride</td>
<td>1786-81-8</td>
<td>217-244-0</td>
<td>Xn, Xi R22, R36 Acute Tox. 4 H302 Eye Irrit. 2A H319</td>
<td>4</td>
</tr>
</tbody>
</table>

Refer to Section 16 for the full text of the GHS and EU Classifications.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye: Flush victim's eyes with large quantities of water, while holding the eyelids apart. Get medical attention if irritation develops or persists.

Skin: Wash skin thoroughly with soap and water. Get medical attention if irritation occurs and persists. Remove and launder clothing before re-use.

Inhalation: Remove victim to fresh air. Get medical attention if symptoms of exposure occur.

Ingestion: If small quantities are swallowed, rinse out mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious or drowsy person. Get medical attention if you feel unwell.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

May cause slight eye and skin irritation. Skin contact may cause numbness.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:

Immediate medical attention should not be required.

Note to Physicians (Treatment, Testing, and Monitoring): Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media: Use material appropriate for surrounding materials.
5.2 Special Hazards Arising from the Substance or Mixture:
Product is not flammable. Thermal decomposition may yield chlorine or oxides of nitrogen.

5.3 Advice for Fire-Fighters:
Fire Fighting Procedures: Fight fire from safe distance or protected location. Water may be ineffective unless used as a fine spray or fog. Use water to cool fire-exposed containers. Contain water used in firefighting from entering sewers or natural waterways.
Precautions for Fire Fighters: Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus. Do not enter fire area without proper protection.

Recommended Protective Equipment for Fire Fighters:

<table>
<thead>
<tr>
<th>EYES/FACE</th>
<th>HANDS</th>
<th>RESPIRATORY</th>
<th>THERMAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="icon" alt="Eye Protection" /></td>
<td><img src="icon" alt="Gloves" /></td>
<td><img src="icon" alt="Respirator" /></td>
<td><img src="icon" alt="Protective Suit" /></td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Avoid contact with skin, eyes or clothing. Wear appropriate protective clothing as described in Section 8.

Recommended Personal Protective Equipment for Containment and Clean-up:

<table>
<thead>
<tr>
<th>EYES/FACE</th>
<th>HANDS</th>
<th>RESPIRATORY</th>
<th>SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="icon" alt="Eye Protection" /></td>
<td><img src="icon" alt="Gloves" /></td>
<td><img src="icon" alt="Respirator" /></td>
<td><img src="icon" alt="Skin Protection" /></td>
</tr>
</tbody>
</table>

6.2 Environmental Precautions:
Report releases as required by local and national authorities.

6.3 Methods and Material for Containment and Cleaning up:
Contain and collect using an inert absorbent material and place in appropriate containers for disposal. Clean spill site with water.

6.4 Reference to Other Sections:
Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.
7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
Avoid contact with skin, eyes or clothing. Wear protective clothing and equipment as described in Section 8. Avoid breathing mists or vapors. Wash thoroughly with soap and water after handling.

7.2 Conditions for Safe Storage, Including Any Incompatibilities: Store in accordance with label recommendations.

7.3 Specific End Use(s): For professional use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Non-hazardous Ingredients</th>
<th>United States</th>
<th>Germany</th>
<th>United Kingdom</th>
<th>European Union</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None Established</td>
<td>None Established</td>
<td>None Established</td>
<td>None Established</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prilocaine Hydrochloride</th>
<th>United States</th>
<th>Germany</th>
<th>United Kingdom</th>
<th>European Union</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None Established</td>
<td>None Established</td>
<td>None Established</td>
<td>None Established</td>
</tr>
</tbody>
</table>

Biological Exposure Limits: None Established

8.2 Exposure Controls:

Appropriate Engineering Controls: Use with local exhaust ventilation to minimize exposure levels.

Individual Protection Measures (PPE):

Specific Eye/face Protection: Follow facility requirements. Wear safety glasses when the possibility exists for eye contact due to splashing or spraying material.

Specific Skin Protection: Follow facility requirements. Wear impervious gloves to prevent skin contact.

Specific Respiratory Protection: Follow facility requirements.

Specific Thermal Hazards: None required.

Recommended Personal Protective Equipment

<table>
<thead>
<tr>
<th>EYES/FACE</th>
<th>HANDS</th>
<th>RESPIRATORY</th>
<th>SKIN</th>
</tr>
</thead>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>32°F (0°C)</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>212°F (100°C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Same as water</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>None</td>
</tr>
<tr>
<td>LEL: Not available</td>
<td></td>
</tr>
<tr>
<td>UEL: Not available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure (mmHg):</td>
<td>Same as water</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Same as water</td>
</tr>
<tr>
<td>Relative density:</td>
<td>1.0</td>
</tr>
<tr>
<td>Solubility(ies):</td>
<td>Complete</td>
</tr>
<tr>
<td>Partition coefficient: n-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>
<tr>
<td>Oxidizing Properties</td>
<td>None</td>
</tr>
</tbody>
</table>

9.2 Other Information: None available

10. STABILITY AND REACTIVITY

10.1 Reactivity: Not reactive.

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: None known.

10.4 Conditions to Avoid: None known.

10.5 Incompatible materials: Avoid contact with water-reactive materials.
11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

**Potential Health Effects:**
- **Eyes:** Liquid can cause slight irritation with tears and blurred vision. May cause numbness of sensation.
- **Skin:** May cause slight skin irritation and numbness.
- **Ingestion:** May cause slight gastrointestinal irritation.
- **Inhalation:** May cause slight respiratory tract irritation with coughing and anesthetic effects.

**Chronic Health Effects:** Prilocaine hydrochloride is metabolized into ortho-toluidine which is associated with chronic health effects.

**Irritation:** May cause slight eye and skin irritation.

**Corrosivity:** No data available.

**Sensitisation:** Product is not expected to cause sensitization.

**Carcinogenicity:** Prilocaine Hydrochloride: Chronic oral toxicity studies of ortho-toluidine, a metabolite of prilocaine, in mice and rats shows that ortho-toluidine is an animal carcinogen. The lowest dose at which effects are seen is approximately 50 times higher than the maximum dose of prilocaine hydrochloride to which a human would be exposed during normal use. Ortho-toluidine is classified by IARC as Category 1 (Carcinogenic to Humans) and by NTP as Reasonably Anticipated to be a Human Carcinogen. None of the components are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU CLP.

**Mutagenicity:** Prilocaine Hydrochloride: Ortho-toluidine has been associated with mutagenicity in *Escherichia coli* DNA repair and phase-induction assays and *Salmonella typhimurium* with metabolic activation. Other tests in *Salmonella typhimurium* with or without metabolic activation and single strand breaks in DNA of V79 hamster cells were negative.

**Medical Conditions Aggravated by Exposure:** None known.

**Acute Toxicity Data:**
Prilocaine hydrochloride: Skin mouse LD50 550 mg/kg

**Reproductive Toxicity Data:** Studies in rats up to 30 times the normal human dose has shown evidence of impaired fertility and harm to the fetus. There is no clear indication of effects in humans.

**Specific Target Organ Toxicity (STOT):**
- **Single Exposure:** None known.
- **Repeated Exposure:** Repeat or chronic exposure may cause hypersensitivity and the development of methemoglobinemia.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:
No data available.

12.2 Persistence and Degradability: No data available.
12.3 Bio-accumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB Assessment: No data available.

12.6 Other Adverse Effects: No adverse effects are expected

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Regulations: Dispose in accordance with all national and local regulations.

Properties (Physical/Chemical) Affecting Disposal: This product will polymerize when exposed to sunlight. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

Waste Treatment Recommendations: Dispose in accordance with national and local regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>14.1 UN Number</th>
<th>14.2 UN Proper Shipping Name</th>
<th>14.3 Hazard Class(s)</th>
<th>14.4 Packing Group</th>
<th>14.5 Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ADR/RID</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IMDG</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IATA/ICAO</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

14.6 Special Precautions for User: Not applicable.

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product is not subject to reporting under CERCLA. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): This product is a medical device and not subject to chemical notification requirements.

Clean Water Act (CWA): This material is not regulated under the Clean Water Act.

Clean Air Act (CAA): This material is not regulated under the Clean Air Act.
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Citaneest® Plain Dental (procaine hydrochloride injection, USP)

MSDS-015-CITANEST PLAIN-US REV.00, November 2014

Superfund Amendments and Reauthorization Act (SARA) Title III Information:
SARA Section 311/312 (40 CFR 370) Hazard Categories:

<table>
<thead>
<tr>
<th>Immediate Hazard:</th>
<th>No</th>
<th>Pressure Hazard:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delayed Hazard:</td>
<td>No</td>
<td>Reactivity Hazard:</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard:</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

<table>
<thead>
<tr>
<th>Components</th>
<th>C.A.S. #</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

State Regulations
California: This product contains the following substances known to the state of California to cause cancer and/or reproductive toxicity:

<table>
<thead>
<tr>
<th>Components</th>
<th>C.A.S. #</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Regulations
Canadian Workplace Hazardous Materials Information System (WHMIS): Medical devices are not subject to WHMIS.

Canadian Environmental Protection Act: This product is a pharmaceutical formulation and not subject to chemical notification requirements.

This SDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the SDS contains all of the information required by the CPR.

European Inventory of Existing Chemicals (EINECS): This product is a pharmaceutical formulation and not subject to chemical notification requirements.

EU REACH: This product is a pharmaceutical formulation and not subject to chemical notification requirements.

Australian Inventory of Chemical Substances: This product is a pharmaceutical formulation and not subject to chemical notification requirements.

China Inventory of Existing Chemicals and Chemical Substances: This product is a pharmaceutical formulation and not subject to chemical notification requirements.

Japanese Existing and New Chemical Substances: This product is a pharmaceutical formulation and not subject to chemical notification requirements.

Korean Existing Chemicals List: This product is a pharmaceutical formulation and not subject to chemical notification requirements.
15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health – 1</th>
<th>Flammability – 0</th>
<th>Physical Hazard – 0</th>
</tr>
</thead>
</table>

Full text of classification abbreviations used in Section 2 and 3:
- Xn Harmful
- Xl Irritant
- R22 Harmful if swallowed.
- R36 Irritating to eyes.
- Acute Tox. 4 Acute Toxicity Category 4
- Eye Irrit. 2 Eye Irritation Category 2
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.

Supersedes: 19 July 2013
Date of Current Revision: 8 August 2014
Revision Summary: Converted MSDS to Reach SDS. Updated all sections.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.