Section 1. Product and Company Identification

Product Name: Ziconotide
Product ID: Z324098
Chemical Name: \( \omega \)-Conotoxin MVIIA, SNX-111

Supplier: LKT Laboratories, Inc
545 Phalen Blvd.
St. Paul, MN 55130 USA
Ph: 651-644-8424 Fax: 651-644-8357
www.lktlabs.com - getinfo@lktlabs.com

Emergency Phone #: 1-800-424-9300

Section 2. Hazards Identification

GHS Classification:
- Acute toxicity, Oral (Category 3), H301
- Acute toxicity, Inhalation (Category 3), H331
- Acute toxicity, Dermal (Category 3), H311

GHS Label elements including precautionary statements

Pictogram:

Signal word: Danger

Hazard and precautionary statements:

Hazard statement:
H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled.

Precautionary statements:

P261 - Avoid breathing dust, fumes, gas, mist, vapors and spray.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves and protective clothing.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor or physician if you feel unwell.
P322 - Specific measures (see First Aid Measures in Section 4).
P330 - Rinse mouth.
P361 - Remove or take off immediately all contaminated clothing.
P363 - Wash contaminated clothing before reuse.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents and/or container to an approved waste disposal plant.

HMIS Classification:
- Health hazard: 2
- Chronic health hazard: *
- Flammability: 0
- Physical hazard: 0

NFPA Rating:
- Health hazard: 2
- Fire hazard: 0
- Reactivity hazard: 0

Potential Health Effects:
Inhalation - Acute toxicity. Toxic if inhaled. May cause respiratory irritation.
Skin - Acute toxicity. Toxic if in contact with skin. May cause skin irritation.
Eyes - May cause eye irritation.
Ingestion - Acute toxicity. Toxic if swallowed.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Ingredient: Title Compound Percentage: 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C_{102}H_{172}N_{36}O_{32}S_{7}</td>
</tr>
<tr>
<td>CAS No.</td>
<td>107452-89-1</td>
</tr>
<tr>
<td>Formula Wt.</td>
<td>2639.16</td>
</tr>
<tr>
<td>EC No.</td>
<td></td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact
Flush eyes with water as a precaution.

Skin Contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

Inhalation
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Flash Point
Not available.

Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Firefighting Procedures
Wear self-contained breathing apparatus and protective clothing for fire fighting.

Unusual Fire Hazards
Carbon oxides, nitrogen oxides (NOx) and hydrogen chloride gas.

Section 6. Accidental Release Measures

Personal Precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, dust or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleanup
Avoid raising dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: -20°C

Hazardous Decomposition Products
Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides.

Other Remarks
None.
**Section 8. Exposure Controls/Personal Protection**

**Personal protective equipment**

**EXPOSURE CONTROLS**
Contains no substances with occupational exposure limit values.
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**PERSONAL PROTECTION**

**Eye/face protection:** Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
**Skin protection:** Handle with gloves. The gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full and splash contact - Material: nitrile rubber. Minimum layer thickness: 0.11 mm, Break through time 480 min., Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).
**Body protection:** Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) OR CEN (EU).

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**Section 9. Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid</td>
<td>White powder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in 1% acetic acid (1 mg/mL), water, PBS.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
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</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available</td>
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<tr>
<td>Water solubility</td>
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<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Ignition temperature</td>
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</tr>
<tr>
<td>Autoignition temperature</td>
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</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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**Section 10. Stability and Reactivity**

**Stability**
Stable under recommended storage conditions.

**Materials To Avoid**
Bases.

**Hazardous Decomposition Products**
Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides.
**Section 11. Toxicological Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
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</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available.</td>
</tr>
<tr>
<td>Dermal LD50</td>
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<tr>
<td>Other information on acute toxicity</td>
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<tr>
<td>Reproductive Toxicity</td>
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<tr>
<td>Specific organ toxicity single exposure (GHS)</td>
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<tr>
<td>Specific organ toxicity repeated exposure (GHS)</td>
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</tr>
<tr>
<td>Teratogenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not available.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synergistic effects</td>
<td>Not available.</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Not available.</td>
</tr>
<tr>
<td>Signs and symptoms of exposure</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Potential Health Effects**

- Inhalation: Acute toxicity. Toxic if inhaled. May cause respiratory irritation.
- Skin: Acute toxicity. Toxic if in contact with skin. May cause skin irritation.
- Eyes: May cause eye irritation.
- Ingestion: Acute toxicity. Toxic if swallowed.

**Carcinogenicity**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Section 12. Ecological Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility in soil</td>
<td>Not available.</td>
</tr>
<tr>
<td>Toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>PBT and vPvB assessment</td>
<td>PBT/vPvB assessment not available as chemical safety assessment not required/needed.</td>
</tr>
</tbody>
</table>
Waste Disposal
Dispose of material according to all federal, state and local regulations. Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 13. Disposal Considerations
Waste Disposal
Dispose of material according to all federal, state and local regulations. Offer material to a licensed, professional waste disposal company to dispose of as unused product.

Section 14. Transport Information

DOT (US)
UN Number: 2811   Class: 6.1   Packing Group: III
Proper Shipping Name: Toxic solid, organic, n.o.s.

IATA
UN number: 2811   Class: 6.1   Packing group: III
Proper shipping name: Toxic solid, organic, n.o.s. (Verapamil hydrochloride).

IMDG
UN number: 2811   Class: 6.1   Packing group: III   EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Verapamil hydrochloride)
Marine pollutant: No.

Further Information

Section 15. Regulatory Information

Reach No.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Components
No SARA hazards.

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components
Ziconotide   CAS: 107452-89-1

New Jersey Right To Know Components
Ziconotide   CAS: 107452-89-1

California Prop 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

Section 16. Other Information

Other information
The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.