IDENTITY: Lorazepam in Acetonitrile

SECTION I

Manufacturer: Cerilliant Corporation
811 Palomar Drive, Suite A
Round Rock, TX 78685

Emergency Telephone Number: (512) 238-9974
Date Prepared: January 17, 2012

SECTION II - HAZARDOUS COMPONENTS/IDENTITY INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>Synonyms</th>
<th>CAS Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam</td>
<td>(+)-Lorazepam; 7-Chloro-8-(o-chlorophenyl)-1,3-dihydro-3-hydroxy-2H-1,4-benzodiazepin-2-one; Almezine; Atzapam; Apo-Lorazepam; Alivan; Lorazepam; Novo-Lorazepam; Nu-Loraz</td>
<td>846-49-1</td>
<td>0.1</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>Acetonitrile (German, Dutch), Cyanomethane, Cyanure de methyl (French), Ethanenitrile, Ethyl nitrile, Methanecarbonitrile, methane, cyan-, methyl cyanide, methylcyanid</td>
<td>75-05-8</td>
<td>99.9</td>
</tr>
</tbody>
</table>

SECTION III – Hazard Identification

Flammable, Highly Flammable (EU). Toxic. Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system, and skin. Target Organs: Central Nervous System, Liver.

SECTION IV – First Aid Measures

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion: Do NOT induce vomiting. Rinse mouth with water. Consult a physician.
Skin Contact: Wash off with soap and plenty of water. Consult a physician.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration and transport to a medical facility.

SECTION V - Fire Fighting Measures

Flash Point: 42°F (6°C) (Acetonitrile) Flammable Limits
Method Used: Closed Cup LEL: 4.4% UEL: 16.0% (Acetonitrile)

Extinguishing Media: Dry chemical or carbon dioxide extinguisher.
Special Fire Fighting Procedures: Wear SCBA and protective clothing to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards: Flashback along vapor trail may occur.

SECTION VI - Accidental Release Measures

Evacuate area. Remove all sources of ignition. Use inert absorbent to pick up all spilled material. Transfer to a suitable waste container with non-sparking tools. Wash spill site with appropriate cleaning agent to remove residual traces of spilled material.

SECTION VII - Handling and Storage

Handling: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged repeated exposure. Wash thoroughly after handling.

Storage: Freeze. Keep container closed. Keep away from ignition sources.
SECTION VIII-Exposure Controls/Personal Protection

As appropriate to quantity handled
Ventilation - Local Exhaust: Use with forced ventilation.
General Mechanical: Normal laboratory air exchange.
Special: N/A
Respiratory Protection: NIOSH approved cartridge type respirator with organic vapor cartridges recommended.
Eye Protection: Safety glasses with side shields or chemical safety goggles
Protective Gloves: Compatible chemical resistant gloves.
Other Protective Clothing or Equipment: Lab Coat
Work/Hygienic Practices: Only experienced personnel should be allowed to handle this material.

<table>
<thead>
<tr>
<th>Exposure Limits</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>DFG MAK</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>TWA 40 ppm STEL 60 ppm</td>
<td>TWA 20 ppm (skin)</td>
<td>40 ppm</td>
<td>NIOSH  REL TWA 34 mg/m³ (nitriles)</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

SECTION IX-Physical/Chemical Properties

Boiling Point (degrees C): 82 (179.6 F) (Acetonitrile)
Specific Gravity (Water=1): 0.783 (Acetonitrile)
Vapor Pressure (mmHg): 100 @ 27°C (Acetonitrile)
Melting Point (degrees C): -45 (Acetonitrile)
Vapor Density (Air=1): 1.42 (Acetonitrile)
Evaporation Rate (Butyl Acetate=1): 5.79
Solubility in Water: Miscible (Acetonitrile)
Appearance and Odor: Clear, colorless liquid, ethereal odor (acetonitrile)

SECTION X-Stability and Reactivity

Stability: Stable
Conditions to Avoid: Light, Heat, sparks or other sources of ignition.
Incompatible Materials: Acids, bases, oxidizing agents, reducing agents, alkali metals, nitrogen-fluorine compounds, oleum, perchlorates, nitrating agents, iodum, dinitrogen tetroxide.
Hazardous Decomp Poits: Highly toxic fumes of carbon monoxide, carbon dioxide, and nitrogen oxides.
Hazardous Polymerization: Will Not Occur
Conditions to Avoid: N/A

SECTION XI-Toxicological Information

Routes of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes
Carcinogenicity: NTP? N/A IARC? N/A OSHA? N/A

Symptoms of Exposure:
Exposure to Acetonitrile may cause eye and skin irritation, nausea, vomiting, constriction of the throat, confusion, headache, tachycardia, dyspnea, chest pain, cough, bile- or blood-stained emesis, tachypnea, cyanosis, lacrimation, convulsions, coma, diarrhea, abdominal pain, weakness, fatigue, flushing of the face, tightness of the chest, difficult breathing, respiratory depression, shock, dizziness, drowsiness, drop in blood pressure, rapid pulse, lassitude, stupor, irritability, unconsciousness and death.
Toxicity Data:
Acetonitrile
oral-Human TD_{50}: 570 mg/kg
inhalation-human TC_{50}: 160 ppm/4H
oral-rat LD_{50}: 2730 mg/kg
inhalation-rat LC_{50}: 7551 ppm/8H
intraperitoneal-rat LD_{50}: 850 mg/kg
intravenous-rat LD_{50}: 1660 mg/kg
The toxicological properties of Lorazepam have not been fully investigated. It should be assumed to have toxic effects and, therefore, procedures appropriate for the safe handling of hazardous chemicals should be followed.

**SECTION XII-Ecological Information**

No data available.

**SECTION XIII-Disposition Considerations**

Waste materials should be disposed of under conditions that meet Federal, State, and Local environmental control regulations. Contact a licensed waste disposal specialist to dispose of this material.

**SECTION XIV-Transportation Information**

<table>
<thead>
<tr>
<th>DOT</th>
<th>IATA</th>
</tr>
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<tbody>
<tr>
<td>Proper Shipping Name: Acetonitrile</td>
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</tr>
<tr>
<td>UN #: 1648</td>
<td>UN #: 1648</td>
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<tr>
<td>Class: 3</td>
<td>Class: 3</td>
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<tr>
<td>Packing Group: II</td>
<td>Packing Group: II</td>
</tr>
<tr>
<td>Small quantities exempted</td>
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</tr>
</tbody>
</table>

**SECTION XV-Regulatory Information**

**EU Directives Classification**
Symbol of Danger: F Xn

**R:** 11-20/21/22-36
**Risk Statements:**
Highly Flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes.

**S:** 15-36/37
**Safety Statements:** Keep away from sources of ignition-no smoking. Wear suitable protective clothing and gloves.

**SARA 313:** Listed.

**SECTION XVI-Other Information**

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