Section 1. Product and Company Identification

Product Name: Topotecan Hydrochloride
Product ID: T5761
Chemical Name (Synonyms): Hycamtin; NSC-609669; SKF-104864A
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: Germ cell mutagenicity (Category 1B), H340
Reproductive toxicity (Category 1B), H360

GHS Label elements including precautionary statements

Pictogram

Signal word: Danger

Hazard and precautionary statements
H340 - May cause genetic defects
H360 - May damage fertility or the unborn child
Precautionary statement
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P281 - Use personal protective equipment as required
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P501 - Dispose of contents/container to an approved waste disposal plant
P405 - Store locked up

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

NFPA Rating
Health hazard: 2
Fire hazard: 0
Physical hazard: 0

Potential Health Effects
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.
Skin - May be harmful if absorbed through skin. May cause skin irritation.
Eyes - May cause eye irritation.
Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substances</th>
<th>Ingredient: Title Compound</th>
<th>Percent: 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>C23H25N3O5 • HCl</td>
<td>Formula Wt: 457.91</td>
</tr>
<tr>
<td>CAS No.</td>
<td>119413-54-6</td>
<td>EC No.</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.

**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 for fire fighting if necessary.

**Unusual Fire Hazards**
Carbon oxides, nitrogen oxides (NOx).

Section 6. Accidental Release Measures

**Personal Precautions**
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, 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**
Pick up and arrange disposal without creating 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: Ambient

**Hazardous Decomposition Products**
Not available.

**Other Remarks**
Ingestion - May be harmful if swallowed.
Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**
- **EXPOSURE CONTROLS**: Contains no substances with occupational exposure limit values.
- **General industrial hygiene practice**.
- **PERSONAL PROTECTION**
  - **Eye/face protection**: 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. 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.
  - **Body protection**: Choose body protection in relation to its type, to the concentration and amount of dangerous substances and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
  - **Respiratory protection**: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid.</td>
<td>Pale yellow.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>213-218°C (dec.)</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soluble in methanol, water (52 mg/ml at 25 °C), DMSO (92 mg/ml at 25 °C), ethanol (&lt;1 mg/ml at 25 °C), and 1:1 solution of DMSO: PBS (pH 7.2, ~0.5 mg/ml).</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

| Flash Point | Not available. |

<table>
<thead>
<tr>
<th>Lower explosion limit</th>
<th>Upper explosion limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

| Water solubility | Not available. |

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water</th>
<th>Odor Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative vapor density</th>
<th>Evaporation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Stability</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials To Avoid</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Decomposition Products</th>
<th>Not available.</th>
</tr>
</thead>
</table>

| Hazardous Decomposition Products | Not available. |

<table>
<thead>
<tr>
<th>Stability</th>
<th>Materials To Avoid</th>
<th>Hazardous Decomposition Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable under recommended storage conditions.</td>
<td>Strong oxidizing agents.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 11. Toxicological Information

Oral LD50 Not available.

Inhalation LC50 Not available.

Dermal LD50 Not available.

Other information on acute toxicity Not available.

Skin corrosion/irritation Not available.

Serious eye damage/irritation Not available.

Respiratory or skin sensitization Not available.

Germ cell mutagenicity Not available.

Reproductive Toxicity Not available.

Aspiration Hazard Not available.

Synergistic effects Not available.

Additional Information Not available.

Signs and symptoms of exposure Not available.

Potential Health Effects Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.
Skin - May be harmful if absorbed through skin. May cause skin irritation.
Eyes - May cause eye irritation.
Ingestion - May be harmful 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

Toxicity Not available.

Mobility in soil Not available.

PBT and vPvB assessment not available as chemical safety assessment not required/not applicable.
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)**

Not dangerous goods.

**IATA**

Not dangerous goods.

**IMDG**

Not dangerous goods.

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**

Topotecan Hydrochloride  CAS: 119413-54-6

**New Jersey Right To Know Components**

Topotecan Hydrochloride  CAS: 119413-54-6

**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.