Section 1. Product and Company Identification

Product Name: Etoposide
Product ID: E7657
Chemical Name (Synonyms): EPEG; Lastet; Vepesid

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 4), H302
Carcinogenicity (Category 1B), H350

GHS Label elements including precautionary statements

Pictogram
Signal word: Danger

Hazard and precautionary statements

Hazard statements
H302 - Harmful if swallowed.
H350 - May cause cancer.

Precautionary statements
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P281 - Use personal protective equipment as required.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P308 + P313 - IF exposed or concerned: Get medical advice.
P330 - Rinse mouth.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification
Health hazard: 1
Chronic health hazard: *
Flammability: 0
Physical hazard: 0

NFPA Rating
Health hazard: 1
Fire hazard: 0
Reactivity hazard: 0

Potential Health Effects
Inhalation - May be harmful if inhaled. May cause respiratory 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>Formula</th>
<th>Formula Wt.</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula Wt.</td>
<td>588.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS No.</td>
<td>33419-42-0</td>
<td></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 with soap and plenty of water. 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 for firefighting if necessary.

**Unusual Fire Hazards**
Carbon oxides.

**Section 6. Accidental Release Measures**

**Personal Precautions**
Use personal protective equipment. Avoid dust formation. Avoid breathing dust, 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 the 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: Ambient

**Hazardous Decomposition Products**
Not available.

**Other Remarks**
(Semi-Synthetic)
### Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

Contains no substances with occupational exposure limit values.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**PERSONAL PROTECTION**

**Eye/face protection**: Safety glasses with side-shields conforming to EN 166. 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. 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).

### Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Semi-Synthetic) Solid.</td>
<td>White crystal powder.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point</th>
<th>Volatility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Melting Point</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>236°C-251°C</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solubility</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slightly soluble in ethanol or chloroform. Practically insoluble in water.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point</th>
<th>Ignition temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Water solubility</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practically insoluble in water.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

<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

**Stability**

Stable under recommended storage conditions.

**Materials To Avoid**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Not available.
### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Value</th>
<th>Remarks/Changes in</th>
<th>Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Rat - 1,784 mg/g</td>
<td>Behavioral: Somnolence (general depressed activity).</td>
<td>Behavioral: Somnolence (general depressed activity).</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other information on</td>
<td>Not available.</td>
<td>Germ cell mutagenicity</td>
<td>Laboratory experiments have shown mutagenic effects.</td>
</tr>
<tr>
<td>acute toxicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Not available.</td>
<td>Aspiration Hazard</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific organ toxicity</td>
<td>Not available.</td>
<td>Synergistic effects</td>
<td>Not available.</td>
</tr>
<tr>
<td>single exposure (GHS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific organ toxicity</td>
<td>Not available.</td>
<td>Additional Information</td>
<td>RTECS: KC0190000 To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.</td>
</tr>
<tr>
<td>repeated exposure (GHS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>Not available.</td>
<td>Signs and symptoms of exposure</td>
<td>Liver - Irregularities - Based on Human Evidence.</td>
</tr>
</tbody>
</table>

#### Potential Health Effects
- Inhalation: May be harmful if inhaled. May cause respiratory irritation.
- Skin: May be harmful if absorbed through skin. May cause skin irritation.
- Eyes: May cause eye irritation.
- Ingestion: Acute toxicity - Harmful if swallowed.
- Carcinogenicity: May cause cancer.

#### Carcinogenicity
- RTECS: KC0190000 To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.
- AC/AGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by AC/AGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.
- OSHA: No components 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>Test Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### PBT and vPvB assessment
- Not available as chemical safety assessment not required/not
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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. 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** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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

**SARA 311/312 Components** Acute health hazard, chronic health hazard.

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

**Pennsylvania Right To Know Components** Etoposide CAS #: 33419-42-0 Revision Date: 2011-11-18

**New Jersey Right To Know Components** Etoposide CAS #: 33419-42-0 Revision Date: 2011-11-18

**California Prop 65 Components** WARNING! This product contains a chemical known to the State of California to cause cancer. Etoposide CAS #: 33419-42-0 Revision Date: 2011-11-18

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Etoposide CAS #: 33419-42-0 Revision Date: 2011-11-18

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.