Section 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Microcystin (N-Me)-LR</th>
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<tbody>
<tr>
<td>Product ID</td>
<td>M3410</td>
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<tr>
<td>Chemical Name (Synonyms)</td>
<td>MC(N-Me)LR</td>
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<tr>
<td>Supplier</td>
<td>LKT Laboratories, Inc</td>
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<tr>
<td></td>
<td>545 Phalen Blvd.</td>
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<tr>
<td></td>
<td>St. Paul, MN 55130 USA</td>
</tr>
<tr>
<td></td>
<td>Ph: 651-644-8424 Fax: 651-644-8357</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.lktlabs.com">www.lktlabs.com</a> - <a href="mailto:getinfo@lktlabs.com">getinfo@lktlabs.com</a></td>
</tr>
<tr>
<td>Emergency Phone #</td>
<td>1-800-424-9300</td>
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Section 2. Hazards Identification

GHS Classification

- Acute toxicity, Oral (Category 2), H300
- Acute toxicity, Skin (Category 2), H310
- Skin irritation (Category 2), H315
- Skin sensitization (Category 1), H317
- Eye irritation (Category 2A), H319
- Acute toxicity, Inhalation (Category 1), H330
- Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements including precautionary statements

- **Pictogram**: 
- **Signal word**: Danger
- **Hazard and precautionary statements**

Hazard statements
- H300 - Fatal if swallowed.
- H310 - Fatal in contact with skin.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H330 - Fatal if inhaled.
- H335 - May cause respiratory irritation.

Precautionary statements
- P260 - Do not breathe dust, fumes, gas, mist, vapors and spray.
- P262 - Do not get in eyes, on skin or on clothing.
- 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.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P280 - Wear protective gloves, protective clothing, eye protection and face protection.
- P284 - Wear respiratory protection.
- P301 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302 + P352 - IF ON SKIN: wash with plenty of soap and water.
- P303 + P361 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P305 + P310 + P365 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER or doctor/physician immediately. If swallowed, call a POISON CENTER or doctor/physician immediately.
- P305 + P310 - Prompt medical attention is required without delay.
- P305 + P351 + P338 - IF ON SKIN: Rinse cautiously with plenty of soap and water for several minutes. Remove contaminated clothing and wash it before reuse.
- P310 - Prompt medical attention is required without delay.
- P317 - May cause an allergic skin reaction. Avoid contact with skin and eyes.
- P319 - Causes serious eye irritation. Avoid contact with eyes.
- P330 - May cause respiratory irritation. Avoid contact with eyes, mouth, and skin.
- P332 - Avoid release to the environment.
- P333 - Avoid release to the environment.
- P334 - Avoid release to the environment.
- P335 - Avoid release to the environment.
- P337 - Avoid release to the environment.
- P340 - Avoid release to the environment.
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- P346 - Avoid release to the environment.
- P347 - Avoid release to the environment.
- P348 - Avoid release to the environment.
- P349 - Avoid release to the environment.
- P350 - Wear protective gloves, protective clothing, eye protection and face protection.
- P351 - Avoid release to the environment.
- P360 - Avoid release to the environment.
- P361 - Remove/Take off immediately all contaminated clothing.
- P362 - Remove/Take off immediately all contaminated clothing.
- P363 - Wash contaminated clothing before reuse.
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- P404 - Store locked up.
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- P496 - Store locked up.
- P497 - Store locked up.
- P498 - Store locked up.
- P499 - Store locked up.
- P500 - Store locked up.
- P501 - Dispose of contents & or container to an approved waste disposal plant.

HMIS Classification

- Health hazard: 3
- Flammability: 0
- Physical hazards: 0

NFPA Rating

- Health hazard: 3
- Fire: 0
- Reactivity hazard: 0

Potential Health Effects

- Inhalation - Fatal if inhaled.
- Skin - Fatal in contact with skin.
- Ingestion - Fatal if swallowed.
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>( \text{C}<em>50\text{H}</em>{76}\text{N}<em>{10}\text{O}</em>{12} )</td>
<td>Formula Wt.: 1009.3</td>
</tr>
<tr>
<td>CAS No.</td>
<td>1865776-22-2</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 for at least 5 minutes. If contacts are present, remove and continue to flush eyes for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Consult a physician.

Skin Contact
Wash off with soap and plenty of water for at least 15 minutes. Take victim immediately to hospital. Consult a physician. Be sure to remove the contaminated clothing and shoes and wash before wearing again.

Inhalation
If breathed in, move person into fresh air. If breathing becomes difficult, give oxygen and consult a physician. If not breathing, give artificial respiration. Consult a physician.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult the local poison center and 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 and full protective clothing to prevent contact with skin and eyes.

Unusual Fire Hazards
Hazardous decomposition product formed under fire conditions. Carbon oxides, nitrogen oxides (NOx). It may emit toxic gases.

Section 6. Accidental Release Measures

Personal Precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Wear chemical resistant gloves, boots and goggles for clean up. Evacuate personnel to safe areas. Avoid breathing dust.

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. Wash spill site and ventilate area after material pickup is complete.

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. Material is highly toxic. Avoid prolonged or repeated exposure. Wash thoroughly after handling material.

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

Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions. Carbon oxides, nitrogen oxides (NOx).

Other Remarks
Material is highly toxic.
Section 8. Exposure Controls/Personal Protection

**Personal protective equipment**

**EXPOSURE CONTROLS**
Contains no substances with occupational exposure limit values.

**GENERAL INDUSTRIAL HYGIENE AND SAFETY 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 love’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:** Wear suitable protective clothing. Choose body protection in relation to its type, to the concentration and amount of dangerous substances and to the specific workplace.

**Respiratory protection:** 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). Handle in a chemical fume hood with adequate ventilation.

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Volatility</td>
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<tr>
<td>Melting Point</td>
<td>Density</td>
</tr>
<tr>
<td>Solubility</td>
<td>pH</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Ignition</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Temperature</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Autoignition</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Vapor pressure</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Odor</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Evaporation</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

**Stability**

Stable under recommended storage conditions.

**Materials To Avoid**

Avoid contact with strong oxidizing agents. Avoid use of Dimethyl sulfoxide (DMSO) because of its ability to carry toxic materials across membranes.

**Hazardous Decomposition Products**

Hazardous decomposition products formed under fire conditions. Carbon oxides, nitrogen oxides (NOx).
Section 11. Toxicological Information

**Oral LD50** Fatal if swallowed.

**Skin corrosion/irritation** Causes skin irritation.

**Inhalation LC50** Fatal if inhaled.

**Serious eye damage/irritation** Causes serious eye irritation.

**Dermal LD50** Fatal in contact with skin.

**Respiratory or skin sensitization** May cause allergic skin reaction. May cause respiratory irritation.

**Other information on acute toxicity** Not available.

**Germ cell mutagenicity** Not available.

**Reproductive Toxicity** Not available.

**Aspiration Hazard** Fatal if inhaled.

**Specific organ toxicity single exposure (GHS)** Not available.

**Synergistic effects** Not available.

**Specific organ toxicity repeated exposure (GHS)** Not available.

**Additional Information** Not available.

**Teratogenicity** Not available.

**Signs and symptoms of exposure** Not available.

**Potential Health Effects**
- Inhalation - Fatal if inhaled.
- Skin - Fatal in contact with skin.
- Ingestion - Fatal if swallowed.
- Eyes - Causes serious eye irritation.
- Liver - Congeners are selectively transported to the liver resulting in acute liver failure and tumor promotion.

**Carcinogenicity**

Section 12. Ecological Information

**Toxicity** Not available.

**Mobility in soil** Not available.

**PBT and vPvB assessment** PBT/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.

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Bioaccumulative potential Not available.

Section 14. Transport Information

**DOT (US)**

UN number: 3462  Class: 6.1  Packing group I  
Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Microcystin (N-Me)-LR)

**IATA**

UN number: 3462  Class: 6.1  Packing group: I  
Proper shipping name: Toxins, extracted from living sources clear film, n.o.s. (Microcystin (N-Me)-LR)

**IMDG**

UN number: 3462  Class: 6.1  Packing group: I  
Proper shipping name: TOXINS, EXTRACTED FROM LIVING SOURCES CLEAR FILM, N.O.S. (Microcystin (N-Me)-LR)

Further Information

Section 15. Regulatory Information

**SARA 302 Components**

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

**SARA 313 Components**

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**

Acute health hazard

**Massachusetts Right To Know Components**

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

**Pennsylvania Right To Know Components**

Microcystin (N-Me)-LR  CAS: 169789-55-3

**New Jersey Right To Know Components**

Microcystin (N-Me)-LR  CAS: 169789-55-3

**California Prop 65 Components**

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

Section 16. 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.
For emergencies in the USA, call CHEMTREC 800-424-9300