

**Section 1. Product and Company Identification**

Product Name [D-Asp3, (E)-Dhb7]-Microcystin-HtyR
Product ID M3414
Chemical Name (Synonyms) MC(N-Me)LR
Supplier LKT Laboratories, Inc
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 St. Paul, MN 55130 USA
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 www.lktlabs.com - getinfo@lktlabs.com
Emergency Phone # 1-800-424-9300

Section 2. Hazards Identification

GHS Classification Acute toxicity, Oral (Category 2), H300
 Acute toxicity, Dermal (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 + 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.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a POISON CENTER or doctor/physician.
 P320 - Specific treatment is urgent (see supplemental 1st aid instructions on this label).
 P330 - Rinse mouth.
 P333 + P313 - IF SKIN irritation occurs: Get medical advice/attention.
 P337 + P313 - IF eye irritation persists: Get medical advice/attention.
 P338 - Remove contact lenses, if present and easy to do. Continue rinsing.
 P350 - Gently wash with plenty of soap and water.
 P361 - 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.
 P405 - 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.

Eyes - Causes serious eye irritation.
Liver - Congeners are selectively transported to the liver resulting in acute liver failure and tumor promotion.

Section 3. Composition/Information on Ingredients

Substances	Ingredient: Title Compound	Percent: 100	
Formula	C ₅₂ H ₇₂ N ₁₀ O ₁₃		Formula Wt. 1045.19
CAS No.	913178-65-1		EC No.

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 few 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 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: 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

Physical State	Clear film	Color	Colorless
Boiling Point	Not available.	Volatility	Not available.
Melting Point	Not available.	Density	Not available.
Solubility	Soluble in Methanol and Dimethyl sulfoxide.	pH	Not available.
Flash Point	Not available.	Ignition temperature	Not available.
Lower explosion limit	Not available.	Autoignition temperature	Not available.
Upper explosion limit	Not available.	Vapor pressure	Not available.
Water solubility	Not available.	Odor	Not available.
Partition coefficient: n-octanol/water	Not available.	Odor Threshold	Not available.
Relative vapor density	Not available.	Evaporation rate	Not available.

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).

Possibility of hazardous reactions

Under thermal decomposition, may emit toxic gases including carbon monoxide and carbon dioxide.

Conditions to avoid

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.
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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

conducted.

Persistence and degradability Not available.

Other adverse effects Not available.

Bioaccumulative potential Not available.

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) UN number: 3462 Class: 6.1 Packing group: I
Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. ([D-Asp3, (E)-Dhb7]-Microcystin-HtyR)

IATA UN number: 3462 Class: 6.1 Packing group: I
Proper shipping name: Toxins, extracted from living sources clear film, n.o.s. ([D-Asp3, (E)-Dhb7]-Microcystin-HtyR)

IMDG UN number: 3462 Class: 6.1 Packing group: I
Proper shipping name: TOXINS, EXTRACTED FROM LIVING SOURCES CLEAR FILM, N.O.S. ([D-Asp3, (E)-Dhb7]-Microcystin-HtyR)

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, 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 [D-Asp3, (E)-Dhb7]-Microcystin-HtyR

New Jersey Right To Know Components [D-Asp3, (E)-Dhb7]-Microcystin-HtyR

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

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.

Updated 7/19/2018

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