1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name	:	Microcystin LR
Product Number	:	10-2719
Brand	:	Focus Biomolecules
CAS-No.	:	101043-37-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	:	For Laboratory Research Use Only

1.3 Details of the supplier of the safety data sheet

Company	:	Focus Biomolecules 400 Davis Drive, Suite 600 Plymouth Meeting PA, 19462
Telephone	:	+1 855-362-8721
E-mail	:	support@focusbiomolecules.com

1.4 Emergency telephone number

Emergency Phone #	:	CHEMTREC within USA/Canada 1-800- 424-9300 CHEMTREC outside USA/Canada 1-703-527-3887

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 2), H300; Acute toxicity, Dermal (Category 2), H310
Skin Irritation (Category 2), H315, Eye Irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word: Danger

Hazard statement(s):

H300	Fatal if swallowed.
H360	Fatal if in contact with the skin.

Precautionary statement(s)

P261	Avoid breathing dusst/fume/gas/mist/vapors/spray
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water
P304+P340	IF INHALED: Remove to fresh air and keep comfortable
P305+P351+P338	IF IN EYES: Rinse with water for several minutes. Remove contacts if present and easy to do.
P312	Call a poison center/doctor if you feel unwell
P337+P333+P313	If eye irritation persists or skin irritation or rash occurs get medical advice/ attention

P405 Store locked up.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Cyanoginosin-LR; Toxin T 17 (M. seruginosa); MC-LR

Formula : $C_{49}H_{74}N_{10}O_{12}$
Molecular weight : 995.17 g/mol
CAS-No. : 101043-37-2

Hazardous components

Component	Classification	Concentration
Mycrocystin LR		
	Acute Tox. Oral 2;Acute Tox. Derm 2; H300, H310	95- 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Remove contaminated clothing**.** Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water. Remove contact lenses if present and easy to do so. Consult a physician

If swallowed
Do not induce vomiting. Call for medical help

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

6.4 For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Through de Dusting is recommended. Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature -20°C
Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.
Hazardous components without workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection
Face shield and safety glasses 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
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).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties a)

Appearance	Form: solid	
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	No data available
f)	Initial boiling point and boiling range	No data available
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
Strong oxidizing agents,

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Oral: TDLO: 1 mg/kg (mouse)

LD50: 5 mg/kg (mouse) >5 mg/kg (rat)

Inhalation: LC50: 18 mg/m^3/10M (mouse)

Dermal: No data available

Skin corrosion/irritation
Irritant - sensitization possible

Serious eye damage/eye irritation
Irritant

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

IARC: 2B

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 on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard
No data available

Additional Information

Repeated dose

RTECS: GT2810000

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12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 2811 Class: 6.1 Packing group: I
Proper shipping name: Alkaloids, solid, n.o.s. (Microcystin LR)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No

IMDG
UN number: 2811 Class: 6.1 Packing group: I EMS-No: F-A, S-A
Proper shipping name: ALKALOIDS, SOLID, N.O.S. (Microcystin LR)

IATA
UN number: 2811 Class: 6.1 Packing group: I
Proper shipping name: Alkaloids, solid, n.o.s. (Microcystin LR)

15. REGULATORY INFORMATION

SARA 302 Components
This material does not contain any components with a section 302 EHS TPQ.

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 Hazards
No SARA Hazards

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
H300	Fatal if swallowed.
H310	Fatal if in contact with the skin

Further information

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