

Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Product Name: Methylene Blue Trihydrate

CAS: 7220-79-3, 122965-43-9

Synonyms: Basic blue 9
C.I. 52015
3,7-Bis(Dimethylamino)phenazathionium chloride

Chemical Formula: C₁₆H₁₈N₃ClS·3H₂O

Contact Information:

UFC Biotechnology, Inc.
435 Creekside Drive, Suite 5
Amherst, New York 14228
Office Number: 716-777-3776

INFOTRAC (24HR Emergency Telephone), call:
1-800-535-5053

International INFOTRAC, call: 1- 352-323-3500

For non-emergency assistance, call: 1-716-777-3776

Section 2: Hazards Identification

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
H302 Acute oral toxicity (Category 4)



2.2 GHS Label elements, including precautionary statements

Signal word **Warning**

Hazard statement(s)

Harmful if swallowed.

Precautionary statement(s)

P264 Wash face, hands and any exposed skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P501 Dispose of contents/ container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
None identified

Section 3: Composition, Information on Ingredients

3.1 Substances
Synonyms: Basic blue 9
Formula : C₁₆H₁₈N₃ClS·3H₂O
Molecular weight : 373.90 g/mol
CAS-No. : 7220-79-3, 122965-43-9
EC-No. : 200-664-3

Name	Classification	% by Weight
Methylene blue trihydrate	Acute oral toxicity. 4	100% ≤

Section 4: First Aid Measures

4.1 Description of first-aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed	Clean mouth with water and drink afterward plenty of water. Get medical attention if symptoms occur.

- 4.2 Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed**
No data available

Section 5: Firefighting Measures

- 5.1 Extinguishing media**
Suitable extinguishing media Water Foam Carbon dioxide (CO₂) Dry powder
Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.
- 5.2 Special hazards arising from the substance or mixture**
Chlorine, Carbon oxides, Sulfur oxides, Nitrogen oxides
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gasses or vapors possible in the event of fire.
- 5.3 Advice for firefighters**
Stay in the danger area only with self-contained breathing apparatus.
- 5.4 Further information**
Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
- 6.2 Environmental precautions**
Do not let product enter drains. Risk of explosion.
- 6.3 Methods and materials for containment and cleaning up**
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
- 6.4 Reference to other sections**
For disposal see section 13.

Section 7: Handling and Storage

- 7.1 Precautions for safe handling**
Advice on protection against fire and explosion Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities**
Storage conditions Tightly closed. Dry
Storage class Storage class (TRGS 510): 4.1B: Combustible solids
- 7.3 Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure Controls/Personal Protection

- 8.1 Control parameters**
This product does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.
- 8.2 Exposure controls**
Appropriate engineering controls Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substances.
Personal protective equipment
Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles
Skin protection Handle with impervious gloves.
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L
 Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

Body Protection Flame retardant antistatic protective clothing.

Respiratory protection required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure Do not let product enter drains. Risk of explosion.

Section 9: Physical and Chemical Properties

Physical State	Solid
Appearance	Dark green
Odor	Odorless
Odor Threshold	No information available
pH	3-4.5 (1% solution in water)
Melting Point/Range	190 °C / 374 °F
Boiling Point/Range	No information available
Flash Point	Not applicable
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	Negligible
Vapor Density	Not applicable
Specific Gravity	1.2
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Molecular Formula	C16H18ClN3S.3H2O
Molecular Weight	373.90

Section 10: Stability and Reactivity Data

Reactive Hazard	No
Stability	Light sensitive.
Conditions to Avoid	Avoid dust formation. Protect from light. Excess heat. Exposure to light..
Incompatible Materials	Reducing Agent, Bases, Oxidizing agent
Hazardous Decomposition Products	Chlorine, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Sulfur oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

Section 11: Toxicological Information

11.1 Information on toxicological effects	
Acute toxicity	LD50 Oral - Rat - 1180 mg/kg LD50 Dermal – Not listed LD50 Inhalation – Not listed
Skin corrosion/irritation	Irritant
Serious eye damage/eye irritation	Irritant
Respiratory or skin sensitization	Irritant
Germ cell mutagenicity	No data available
Carcinogenicity	
IARC:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	No ingredient 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.

<p>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</p> <p>11.2 Additional Information The toxicological properties have not been thoroughly investigated.</p>

Section 12: Ecological Information

<p>12.1 Toxicity Do not empty into drains</p> <p>12.2 Persistence and degradability No data available</p> <p>12.3 Bioaccumulative potential No data available</p> <p>12.4 Mobility in soil No data available</p> <p>12.5 Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted</p> <p>12.6 Endocrine disrupting properties No data available</p> <p>12.7 Other adverse effects No data available</p>

Section 13: Disposal Considerations

<p>13.1 Waste treatment methods Product Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.</p>

Section 14: Transport Information

<p>DOT (US) Not a dangerous goods during transportation IMDG Not regulated IATA Not regulated</p>

Section 15: Other Regulatory Information

<p>US Federal Regulations Us Toxic Substances Control Act (TSCA): Active SARA 302: No chemicals were found. SARA 313: No chemicals were found. SARA 311/312 Hazards: No chemicals were found</p>

Section 16: Other Information

<p>References: Not available. Other Special Considerations: Not available. Created: 7/25/2022 Last Updated: 7/25/2022</p> <p>The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall UFC Biotechnology be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if UFC Biotechnology has been advised of the possibility of such damages.</p>
