

SAFETY DATA SHEET

Version 1.0
Revision Date 09/29/2026
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SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : **Methylene Blue 1% Solution**
Product Number : MBLUE-30ML
Brand : 4AminoLabs
CAS-No. (active) : 61-73-4
Reference batch : See container label

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

Identified uses : Laboratory research and analytical reference use.
Uses advised against : Not for human or veterinary use. Not a drug, dietary supplement, food, or cosmetic.

1.3 Details of the supplier of the safety data sheet

Company : 4AminoLabs
1001 S. Main Street, STE 600
Kalispell, MT 59901
UNITED STATES
Telephone : +1 (256) 472-1983
E-mail : sales@4aminolabs.com
Website : www.4aminolabs.com

1.4 Emergency telephone number

Emergency Phone # : Poison Control Center (US): 1-800-222-1222 (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a hazardous substance or mixture according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

Hazard pictograms : None
Signal word : None
Hazard statements : None
Precautionary statements : None

Other hazards

None known. Strong dye; stains skin, clothing and surfaces.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture (sterile aqueous solution)

Components

Chemical name	CAS-No.	Concentration
Methylene blue Synonyms: methylthioninium chloride; C.I. Basic Blue 9 Formula: $C_{16}H_{18}ClN_3S$ Molecular weight: 319.85 g/mol	61-73-4	1 % w/v (10 mg/mL)
Water (deionized)	7732-18-5	Balance

Not classified: classification is calculated from the actual 1 % concentration (pure methylene blue is Acute Tox. 4, Oral).

SECTION 4. FIRST AID MEASURES

General advice	: Show this safety data sheet to the doctor in attendance if symptoms persist.
If inhaled	: After inhalation: fresh air.
In case of skin contact	: Rinse skin with water/ shower.
In case of eye contact	: After eye contact: rinse out with plenty of water. Remove contact lenses. Consult a physician if irritation persists.
If swallowed	: After swallowing: rinse mouth, make victim drink water (two glasses at most). Consult a physician if feeling unwell.
Most important symptoms and effects, both acute and delayed	: No significant effects expected under normal laboratory handling. See section 11.
Notes to physician	: Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards during firefighting	: Not combustible (aqueous solution).
Hazardous combustion products	: Carbon oxides Nitrogen oxides (NO _x) Sulfur oxides
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Avoid substance contact. For personal protection see section 8.
Environmental precautions	: Do not let product enter drains.
Methods and materials for containment and cleaning up	: Take up with liquid-absorbent material (e.g. vermiculite, sand, universal binder). Place in a closed, labeled container and dispose of properly (see section 13). Clean up affected area with water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: Handle in accordance with good laboratory hygiene and safety practice. Use aseptic technique once the vial is opened.
Hygiene measures	: Wash hands after working with substance.
Further information on storage conditions	: Tightly closed. Protect from light. Store upright.
Storage class	: 12, Non Combustible Liquids

Recommended storage temperature : 68 - 77 °F / 20 - 25 °C
Materials to avoid : Strong oxidizing agents.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : General laboratory ventilation.

Personal protective equipment

Respiratory protection : Not required under normal conditions of use.

Hand protection : Material: Nitrile rubber
Glove thickness: minimum 0.11 mm
Protective index: splash contact
Remarks: Inspect gloves before use and dispose of after contamination.

Eye protection : Safety glasses with side shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection : Laboratory coat.

Hygiene measures : Wash hands after working with substance.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid
Color : Dark blue solution
Odor : Odorless
Odor Threshold : No data available
pH : No data available
Melting point/freezing point : approx. 0 °C (32 °F)
Boiling point/boiling range : approx. 100 °C (212 °F)
Flash point : Not applicable (aqueous solution)
Evaporation rate : No data available
Flammability (solid, gas) : Not flammable
Upper/lower explosion limit : Not applicable
Vapor pressure : approx. 23 hPa at 20 °C (water)
Relative vapour density : No data available
Relative density : approx. 1.0
Water solubility : Completely miscible
Partition coefficient: n-octanol/water : No data available
Autoignition temperature : Not applicable
Decomposition temperature : No data available
Viscosity : No data available
Explosive properties : Not explosive
Oxidizing properties : None
Molecular weight : 319.85 g/mol (methylene blue)

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No data available

Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	: No hazardous reactions known under normal conditions of use.
Conditions to avoid	: Freezing, excessive heat, direct light.
Incompatible materials	: Strong oxidizing agents.
Hazardous decomposition products	: In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Not classified for this 1 % solution (calculated). Pure methylene blue: LD50 Oral - Rat - 1,180 mg/kg; Acute Tox. 4.

Skin corrosion/irritation

Not classified.

Serious eye damage/eye irritation

Not classified. May cause mild, transient irritation.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component 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 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

Not applicable

11.2 Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated for this mixture.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

This product neither contains, nor was manufactured with, a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- | | | |
|------------------------|---|---|
| Waste from residues | : | Waste material must be disposed of in accordance with national, state, and local regulations using a licensed waste disposal contractor. Leave chemicals in original containers. No mixing with other waste. Do not dispose of in household trash or sewer. |
| Contaminated packaging | : | Handle uncleaned containers like the product itself. |

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

National Regulations

49 CFR (DOT)

Not regulated as a dangerous good

- | | | |
|------------------------------|---|--|
| Poison Inhalation Hazard | : | No |
| Special precautions for user | : | Not classified as dangerous in the meaning of transport regulations. |

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 302 / 304 Extremely Hazardous Substances

This material does not contain any components with a section 302 EHS TPQ or section 304 EHS RQ.

- | | | |
|----------------------|---|---|
| SARA 311/312 Hazards | : | No SARA Hazards |
| SARA 313 | : | 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. |

Clean Air Act

This product does not contain any hazardous air pollutants (HAP) as defined by the U.S. Clean Air Act Section 112 (40 CFR 61), nor any Class I or Class II ODS.

Clean Water Act

This product does not contain any Hazardous Substances listed under Section 311, Table 116.4A, or toxic or priority pollutants under Section 307.

US State Regulations

- | | | |
|-----------------------------|---|---|
| Massachusetts Right To Know | : | No components are subject to the Massachusetts Right to Know Act. |
| Pennsylvania Right To Know | : | No components are subject to the Pennsylvania Right to Know Act. |
| New Jersey Right To Know | : | No components are subject to the New Jersey Right to Know Act. |

Maine / Vermont / Washington : Product does not contain any listed chemicals.
Chemicals of High Concern
California Prop. 65 : This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Inventories

TSCA : All components of this product are listed as active on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA-DGR - International Air Transport Association Dangerous Goods Regulations; IMDG - International Maritime Dangerous Goods; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population; NIOSH - National Institute for Occupational Safety and Health; NTP - National Toxicology Program; ODS - Ozone Depleting Substance; OSHA - Occupational Safety and Health Administration; PPE - Personal Protective Equipment; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average.

For research use only. Not for human or veterinary use. The information is believed to be correct but is not exhaustive and shall be used solely as a guideline, based on current knowledge of the chemical substance or mixture, and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. 4AminoLabs shall not be held liable for any damage resulting from handling or from contact with the above product. The burden of safe use rests with the user.

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