

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Methylene Blue Loeffler Solution
CAS number	See Section 3
Synonyms	N/A

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

Identified uses	Laboratory chemicals.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids	Category 3
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2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Flammable liquid and vapor.

Precautionary statements

Prevention: Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Wear protective gloves/ eye protection/ face protection.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Fire: In case of fire, use dry sand, dry chemical, or alcohol-resistant foam to extinguish.

Storage: Store in a well-ventilated place. Keep cool.

Disposal: 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 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Ethanol	Ethyl alcohol; EtOH	64-17-5	23.67%
Water	Aqua; H ₂ O	7732-18-5	76.02%
Methylene blue	-	7220-79-3	0.3%
Potassium hydroxide	-	1310-58-3	0.01%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

Remove to fresh air.

In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact Rinse out with plenty of water. Remove contact lenses.

If swallowed Make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (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 Specific hazards arising from the substance or mixture

Carbon oxides. Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Special protective equipment and precautions for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Flash Point 40 °C (104 °F)

Autoignition Temperature No data available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
1	3	2	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapors, aerosols. 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. Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Incompatibilities

Rubber, various plastics.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Ethanol	PEL-TWA	1000 ppm 1900 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Ethanol	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Ethanol	IDLH	3300 ppm
	TWA	1000 ppm 1900 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

Personal protective equipment**Eye/face protection**

Safety glasses with side shields or goggles.

Skin protection

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. If exposure limit is exceeded, a full-face respirator with organic cartridge may be worn.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Blue
Odor	Odorless
Odor Threshold	No information available
pH	7.0 - 7.5 at 20 °C (68 °F)
Melting Point/Range	No information available
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	No information available
Vapor Density	No information available
Density	0.97 g/cm ³ at 20 °C (68 °F)
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	N/A
Molecular Weight	N/A
VOC Content(%)	No information available
Oxidizing properties	None

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of explosion/exothermic reaction with hydrogen peroxide, perchlorates, perchloric acid, Nitric acid, mercury(II) nitrate, Nitriles, peroxy compounds, strong oxidizing agents, nitrosyl compounds, peroxides, sodium, potassium, halogen oxides, calcium hypochlorite, nitrogen dioxide, metallic oxides, uranium hexafluoride, iodides, Chlorine, Alkali metals, Alkaline earth metals, alkali oxides, Ethylene oxide, silver with nitric acid, silver compounds with ammonia, potassium permanganate with conc. sulfuric acid.

Risk of ignition or formation of inflammable gases or vapours with halogen-halogen compounds, chromium(VI) oxide, chromyl chloride, Fluorine, hydrides, Oxides of phosphorus, platinum, Nitric acid with potassium permanganate.

Violent reactions possible with the generally known reaction partners of water.

10.4 Conditions to avoid

Heating.

10.5 Incompatible materials

Rubber, various plastics.

10.6 Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	10470 mg/kg (Rat)	-	124.7 mg/L (Rat) 4h

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Ethanol	64-17-5	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Reproductive toxicity

No data available.

Chronic effects

No data available.

11.2 Additional Information

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Ethanol	EC10	Freshwater Algae	11.5 mg/L, 72 hours
	EC50	Freshwater Algae	275 mg/L, 72 hours
	LC50	Freshwater Fish	11200 mg/L, 24 hours
	NOEC	Freshwater Fish	250 mg/L
	EC50	Freshwater Invertebrate Marine Invertebrate	5012 mg/L, 48 hours 857 mg/L, 48 hours
	NOEC	Freshwater Invertebrate Marine Invertebrate	9.6 mg/L, 10 days 79 mg/L, 96 hours

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

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.

SECTION 14: Transport information

DOT (US)

UN-no	UN1170
Proper Shipping Name	Ethanol solutions
Hazard Class	3
Packing Group	III

IMDG

UN-no	UN1170
Proper Shipping Name	Ethanol solutions
Hazard Class	3
Packing Group	III

IATA

UN-no	UN1170
Proper Shipping Name	Ethanol solutions
Hazard Class	3
Packing Group	III

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) - Hazardous Substances

Listed, Potassium hydroxide (CAS #1310-58-3), RQ: 1000 lb.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Listed, Ethanol (CAS #64-17-5).

US state regulations

US. Massachusetts RTK - Substance List

Listed, Ethanol (CAS #64-17-5).

Listed, Potassium hydroxide (CAS #1310-58-3).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Ethanol (CAS #64-17-5).

Listed, Potassium hydroxide (CAS #1310-58-3).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Ethanol (CAS #64-17-5).

Listed, Potassium hydroxide (CAS #1310-58-3).

California Proposition 65

Listed, Ethanol (CAS #64-17-5).

SECTION 16: Other information

Issue date: 12/09/2024

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.