

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Methylene Blue 1.5% in 20% Methanol Solution

CAS number See section 3

Synonyms None

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

Identified uses Laboratory Chemicals

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 2
Acute Oral Toxicity Category 3
Acute Dermal Toxicity Category 3
Acute Inhalation Toxicity - Vapors Category 3
Specific Target Organ Toxicity - single exposure Category 1
Target Organ(s) - Optic nerve, Central nervous system (CNS)
Specific Target Organ Toxicity - repeated exposure Category 1
Target Organ(s) - Kidney, Liver, Spleen, Blood

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic if swallowed, in contact with skin or if inhaled.
Precautionary statements	Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. 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. Keep cool.

Response:

IF exposed: Call a POISON CENTER or doctor/physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Fire:

In case of fire, use CO₂, dry chemical, or foam for extinction.

Storage:

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal:

Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

WARNING: Reproductive Harm.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Methanol	Methyl alcohol; Methyl hydroxide	67-56-1	20%
Methylene Blue Trihydrate	C.I. 52015 trihydrate; Basic Blue 9 trihydrate	7220-79-3	1.5%
Water	-	7732-18-5	78.5%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this sheet to a doctor if medical advice is needed.

If inhaled

Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

If swallowed Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Difficulty in breathing. May cause blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water fog. Alcohol-resistant foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Specific hazards arising from the substance or mixture

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Hazardous Combustion Products: Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen chloride gas.

5.3 Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

5.4 Further information

Flash Point 53.0 °F (11.7 °C) (Pure Methanol)

Autoignition Temperature 867.2 °F (464 °C) (Pure Methanol)

Explosion limits

Upper 36.5% v/v (Pure Methanol)

Lower 7.3% v/v (Pure Methanol)

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
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2	3	0	N/A
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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements. See Section 12 for additional Ecological Information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces, and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Hygiene measures

When using do not eat, drink, or smoke. Provide regular cleaning of equipment, work area, and clothing.

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 open flames, hot surfaces, and sources of ignition. Flammables area.

Incompatibilities

Strong oxidizing agents. Strong acids. Acid anhydrides. Acid chlorides. Strong bases. Metals. Peroxides.

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
Methyl alcohol	(Vacated) TWA	200 ppm 260 mg/m ³
	(Vacated) STEL	250 ppm 325 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Methyl alcohol	TWA	200 ppm
	STEL	250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Methyl alcohol	IDLH	6000 ppm
	TWA	200 ppm 260 mg/m ³
	STEL	250 ppm 325 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	No information available
Odor	Pungent
Odor Threshold	No information available
pH	No information available
Melting Point/Range	No information available
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	36.5% v/v (Pure Methanol)
Lower	7.3% v/v (Pure Methanol)
Vapor Pressure	No information available
Vapor Density	No information available
Density	No information available
Solubility	Miscible in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	867.2 °F (464 °C) (Pure Methanol)
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	Mixture
Molecular Weight	Mixture
VOC Content(%)	20%
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is stable and non-reactive under normal conditions of use, storage, and transport.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Heat, flames, and sparks. Keep away from open flames, hot surfaces, and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Acid anhydrides, Acid chlorides, Strong bases, Metals, Peroxides.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Formaldehyde, Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen chloride gas.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	1187-2769 mg/kg (Rat)	17100 mg/kg (Rabbit)	128.2 mg/L 4h (Rat)
Methylene blue	1180 mg/kg (Rat)	-	-

Skin corrosion/irritation

Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation

Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Not a respiratory sensitizer.

Germ cell mutagenicity

No data available to indicate product or any components present at a greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Methanol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Methylene blue trihydrate	7220-79-3	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Causes damage to organs (central nervous system, optic nerve) by inhalation.

Specific target organ toxicity - repeated exposure

Kidney, Liver, Spleen, Blood.

Reproductive toxicity

Component substance is listed on California Proposition 65 as a developmental hazard.

Chronic effects

May cause blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea, and vomiting.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Product	Species	Test Result
Methanol	Freshwater Fish (Pimephales promelas)	LC50 > 10000 mg/L, 96h
	Microtox	EC50 = 39000 mg/L, 25 min EC50 = 40000 mg/L, 15 min EC50 = 43000 mg/L, 5 min
	Water Flea	EC50 > 10000 mg/L, 24h

12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Likely mobile in the environment due to its volatility and solubility.

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 Number	UN1230
Proper Shipping name	Methanol Solution
Hazard Class	3
Packaging Group	II

IMDG

UN Number	UN1230
Proper Shipping name	Methanol Solution
Hazard Class	3
Packaging Group	II

IATA

UN Number	UN1230
Proper Shipping name	Methanol Solution
Hazard Class	3
Packaging Group	II

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not listed/applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, Methanol (CAS #67-56-1), RQ: 5000 lb.

SARA 304 Emergency release notification

Not listed/applicable.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed/applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed/applicable.

SARA 311/312 Hazardous

Fire Hazard, Acute Health Hazard, Chronic Health Hazard.

SARA 313 (TRI reporting)

Listed, Methanol (CAS #67-56-1).

Other federal regulations

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

Listed, Methanol (CAS #67-56-1).

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

Not listed/applicable.

Safe Drinking Water Act

Contaminate Candidate List.

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

Not listed/applicable.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Methanol (CAS #67-56-1).

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

Listed, Methanol (CAS #67-56-1).

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

Listed, Methanol (CAS #67-56-1).

Listed, Water (CAS #7732-18-5).

California Proposition 65

Listed, Methanol (CAS #67-56-1).

SECTION 16: Other information

Date of Issue: 7/14/2025

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.