



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Methylene Blue, 1% in Ethanol

**Catalog Numbers:**

LC16920

**Synonyms:**

None

**Company Identification:**

LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300 or  
(011) 703-527-3887

### Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
64-17-5	Ethyl alcohol	90
67-56-1	Methyl alcohol	5
67-63-0	Isopropyl alcohol	5
61-73-4	Methylene blue	1

### Section 3 - Hazards Identification

#### Emergency Overview

**Appearance:** *Dark blue*

**Danger!** *Flammable liquid. May be fatal or cause blindness if swallowed. Causes severe eye irritation. May cause skin, respiratory and digestive tract irritation. May cause central nervous system depression. May cause liver and kidney damage. May cause reproductive and fetal effects.*

**Target Organs:** *Kidneys, central nervous system, liver.*

#### Potential Health Effects

**Eye:**

Contact with liquid or vapors causes severe eye irritation. May cause painful sensitization to light.

**Skin:**

May cause skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis.



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

### **Ingestion:**

May cause irritation of the digestive tract. May cause systemic toxicity with acidosis. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

### **Inhalation:**

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma.

### **Chronic:**

Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Prolonged or repeated skin contact may cause defatting and dermatitis. Denatured ethanol is associated with respiratory irritation, central nervous system depression, visual impairment, dermatitis, conjunctivitis, sensory and motor impairment.

## Section 4 - First Aid Measures

### **Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

### **Skin:**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid.

### **Ingestion:**

Do not induce vomiting. Give conscious victim 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid at once.

### **Inhalation:**

Move victim to fresh air immediately. If breathing is difficult, administer oxygen. Give artificial respiration if necessary. Get medical aid at once.

### **Notes to Physician:**

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

### **General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Flammable liquid. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Move container if possible; avoid breathing vapors or dust.

### **Extinguishing Media:**

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

### **Autoignition Temperature:**

No information found.

### **Flash Point:**

57°F (14°C)

### **NFPA Rating:**

Health- 1, Flammability- 3, Instability- 0



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

### Explosion Limits:

Lower: 4.3 Upper: 19

## Section 6 - Accidental Release Measures

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, diatomaceous earth, vermiculite, or other suitable absorbent. Label reclaimed spill material as flammable.

## Section 7 - Handling and Storage

### Handling:

Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, liquid and/or vapor, and can be dangerous. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

### Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

### Engineering Controls:

Facilities using or storing this material should be equipped with an eyewash and safety shower. Provide local exhaust or general dilution ventilation to keep airborne levels below the permissible exposure limits.

### Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Ethyl alcohol	1000 ppm TWA; 1900 mg/m <sup>3</sup> TWA	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA 3300 ppm IDLH	1000 ppm TWA 1900 mg/m <sup>3</sup> TWA
Methyl alcohol	200 ppm TWA 250 ppm STEL	200 ppm TWA 250 ppm STEL 6000 ppm IDLH	200 ppm TWA 260 mg/m <sup>3</sup> TWA
Isopropyl alcohol	200 ppm TWA 400 ppm STEL	400 ppm TWA 500 ppm STEL 2000 ppm IDLH	400 ppm TWA 980 mg/m <sup>3</sup> TWA
Methylene blue	None of the components are on this list	None of the components are on this list	None of the components are on this list

### OSHA Vacated PELs:

Ethyl alcohol: 1000 ppm TWA; 1900 mg/m<sup>3</sup> TWA  
Methyl alcohol: 200 ppm TWA; 250 ppm STEL  
Isopropyl alcohol: 400 ppm TWA; 500 ppm STEL



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

### Personal Protective Equipment

**Eyes:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133. Do not wear contact lenses when working with chemicals.

**Skin:**

Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**

Follow the OSHA respirator regulations found in 29 CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

### Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Clear liquid
<b>Color:</b>	Dark blue
<b>Odor:</b>	Alcohol-like
<b>pH:</b>	No information found.
<b>Vapor Pressure:</b>	40 mm Hg @20C
<b>Vapor Density:</b>	1.6
<b>Evaporation Rate:</b>	No information found.
<b>Viscosity:</b>	No information found.
<b>Boiling Point:</b>	172°F (78°C)
<b>Freezing/Melting Point:</b>	-172°F (-113°C)
<b>Decomposition Temperature:</b>	No information found.
<b>Solubility in water:</b>	Soluble
<b>Specific Gravity/Density:</b>	1.0
<b>Molecular Formula:</b>	No information found.
<b>Molecular Weight:</b>	No information found.

### Section 10 - Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, ignition sources, excess heat.

**Incompatibilities with Other Materials:**

Permonosulfuric acid, potassium hypobromite, bromine trifluoride, nitrosyl and nityl perchlorate, hydrogen peroxides, bromoform, chloroform, nitric acid, sulfuric acid, sulfur dichloride, bromine, acetic acid, platinum, sodium hypoiodite, thiotriazolyl perchlorate, hexachloroamine, thiodiglycol, trichloromelamine, chromium trioxide, chromic anhydride, potassium t-butoxide, potassium bichromate, chromyl chloride, acetyl chloride, acetyl bromide, bromine pentafluoride, permanganic acid, potassium dioxide, hydrogen peroxide/sulfuric acid mixes, ammonium hydroxide/silver oxide mixes, hydrogen peroxide/iodine/phosphorous mixes, silver nitrate, silver/nitric acid mix forms explosive compounds, strong oxidizing agents, alkali metals.

**Hazardous Decomposition Products:**

Carbon monoxide, carbon dioxide, formaldehyde.



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

### Hazardous Polymerization:

Has not been reported

## Section 11 - Toxicological Information

### RTECS:

CAS# 64-17-5: KQ6300000.

CAS# 67-56-1: PC1400000.

CAS# 67-63-0: NT8050000.

CAS# 61-73-4: SO5600000.

### LD50/LC50:

CAS# 64-17-5:

Inhalation, rat: LC50 = 20000 ppm/10H

Oral, rat: LD50 = 7060 mg/kg.

CAS# 67-56-1:

Inhalation, rat: LC50 = 64000 ppm/4H

Oral, rat: LD50 = 5628 mg/kg

Skin, rabbit: LD50 = 15800 mg/kg.

CAS# 67-63-0:

Oral, rat: LD50 = 5045 mg/kg

Skin, rabbit: LD50 = 12800 mg/kg.

CAS# 61-73-4:

Not available

### Carcinogenicity:

CAS# 64-17-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 67-63-0: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 61-73-4: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

### Epidemiology:

Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome". Among the characteristics of this syndrome are intrauterine and postnatal growth deficiency, a distinctive pattern of physical malformation, and behavioral/cognitive impairment such as fine motor dysfunction and mental retardation. Not all affected children have all of the features of the syndrome. Central Nervous System depressant. Alcohol component enhances effect.

### Teratogenicity:

No information found

### Reproductive:

No information found

### Mutagenicity:

No information found

### Neurotoxicity:

No information found

## Section 12 - Ecological Information

No information found



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

### Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

### Section 14 - Transport Information

#### US DOT

**Shipping Name:** Ethanol solution  
**Hazard Class:** 3  
**UN Number:** UN1170  
**Packing Group:** PG II

### Section 15 - Regulatory Information

#### US Federal

##### TSCA:

CAS# 64-17-5 is listed on the TSCA Inventory.  
CAS# 67-56-1 is listed on the TSCA Inventory.  
CAS# 67-63-0 is listed on the TSCA Inventory.  
CAS# 61-73-4 is listed on the TSCA Inventory.

##### SARA Reportable Quantities (RQ):

CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)

##### CERCLA/SARA Section 313:

This material contains Methyl alcohol (CAS# 67-56-1, 5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This material contains Isopropyl alcohol (CAS# 67-63-0, 5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

##### OSHA - Highly Hazardous:

None of the components are on this list.

#### US State

##### State Right to Know:

Ethyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Isopropyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

##### California Regulations:

WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm.

#### European/International Regulations

##### Canadian DSL/NDSL:

CAS# 64-17-5 is listed on Canada's DSL List.



## Material Safety Data Sheet Methylene Blue, 1% in Ethanol

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 67-63-0 is listed on Canada's DSL List.

CAS# 61-73-4 is listed on Canada's DSL List.

### **Canada Ingredient Disclosure List:**

CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.

CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List.

CAS# 61-73-4 is listed on Canada's Ingredient Disclosure List.

## Section 16 - Other Information

MSDS Creation Date: October 4, 1998

Revision Date: December 23, 2010

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