

Material Safety Data Sheet  
**METHYLENE BLUE STOCK SOLUTION**

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Methylene Blue Stock Solution.

**Catalog Numbers:** A-100-2, A-101-2, A-103-2, SO-381

**Company Identification:** ROWLEY BIOCHEMICAL  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

Section 2 - Hazards Identification

## GHS Classifications

### Health Hazards

**H301-Acute Oral Toxicity:** 3

**H332-Acute Inhalation toxicity:** 4

**H315-Skin Corrosion/Skin Irritation:** 2

**H319-Eye damage/Irritation:** 2A

**H334-Respiratory Sensitization:** 1B

**H317-Skin Dermal Sensitization:** 1B

**H341-Germ Cell Mutagenicity:** 2

**H361-Reproductive Toxicity:** 2

**H335-Specific Target Organ Toxicity:** 2

### Physical Hazards:

H225-Flammability: 2

### Environmental Hazards:

H400 Acute Aquatic environmental hazards: 1

Chronic environmental hazards: Not Classified

## Pictograms or Hazard symbols and Hazard statement.



**Danger: Toxic if swallowed.**



Causes severe eye irritation.



Very toxic to aquatic life.



Highly flammable liquid and vapour.



Hamful if inhaled.  
Causes skin irritation.  
May cause allergic skin reaction.



May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### **Chronic**

Oral, Human – woman: May cause reproductive and fetal effects.

Prolonged exposure may cause liver, kidney, and heart damage.

## **Precautionary Statements**

### H301

**P264** Wash thoroughly after handling.

**P270** Do not eat, drink, or smoke when using this product.

**P301 + P310** IF SWALLOWED: Immediately call a POISON CENTER or doctor.

**P330** **Rinse Mouth.**

**P405** Store locked up.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

### H332

**P261** Avoid breathing fumes/mist/vapors.

**P304 + P340** If inhaled, remove person to fresh air and keep comfortable for breathing.

1 Use only outdoors or in a well-ventilated area.

**P312** Call a physician if you feel unwell.

### H315

**P280** Wear protective gloves, clothing, and eye and face protection.

**P302 + P352** If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.

**P332 + P313** If skin irritation occurs, get medical advice/attention.

**P362** Take off contaminated clothing and wash before reuse.

### H319

**P305 + P351 + P338** If in eyes, rinse cautiously with water for several minutes.

**P337 + P313** If eye irritation persists, get medical advice/attention.

**P285** In case of inadequate ventilation, wear respiratory protection.

**P304+P341** IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**P342+P311** if experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

### H334

**P261** Avoid breathing fumes/mist/vapors.

**P285** In case of inadequate ventilation, wear respiratory protection.

**P304+P341** IF INHALED: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**P342+P311** if experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

### H317

**P272** Contaminated work clothing should not be allowed out of the work place.

**P333+P313** IF ON SKIN: Wash with plenty of soap and water.

**P363** Wash contaminated clothing before reuse.

### H341+H361

**P201** Obtain special instructions before use.

**P202** Do not handle until all safety precautions have been read and understood.

**P281** Use personal protective equipment as required.

**P308 + P313** If exposed or concerned, get medical advice/attention.

**P405** Store locked up.

### H335/H336

**P261** Avoid breathing fumes/mist/vapors.

**P271** Use only outdoors or in a well-ventilated area.

**P304 + P340** If inhaled, remove person to fresh air and keep comfortable for breathing.

**P312** If swallowed, call a physician if you feel unwell.

**P403 + P233** Store in a well-ventilated place. Keep container tightly closed.

**P405** Store locked up.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 – Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7220-79-3	Methylene Blue	1.4 w/v
64-17-5	Ethyl Alcohol	90.25 v/v
67-56-1	Methyl Alcohol	4.75v/v
7732-18-5	Water	Balance

### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

**Oral Exposure:** If Swallowing seek immediate medical advice.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

### Section 5 - Fire Fighting Measures

**General Information:** Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

**Flash Point:** 16.6 deg C ( 61.88 deg F)

**Autoignition Temperature:** 363 deg C ( 685.40 deg F)

**Explosion Limits, Lower:**3.3 vol %

**Upper:** 19.0 vol %

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 0

## Section 6 - Accidental Release Measures

### Procedure(s) of Personal Precaution(s):

Wear protective gear.

**Methods for Cleaning up:** Absorb with sand, earth or vermiculite. Carefully sweep up and containerize for proper disposal.

## Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Store capped at room temperature. Keep away from incompatible materials. Protect from heat. Vapors heavier than air, may travel considerable distance and ignite or explode.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethanol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m <sup>3</sup> TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m <sup>3</sup> TWA

**OSHA Vacated PELs:** Ethanol: 1000 ppm TWA; 1900 mg/m<sup>3</sup> TWA

### 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 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Blue

**pH:** N/A

**Water.**

**Vapor Pressure:** 2.3 kPa @ 20deg. C

**Vapor Density:** 0.62 (Air=1)

**Evaporation Rate:** N/A

**Viscosity:** N/A

**Boiling Point:** 100 deg. C

**Solubility:** N/A

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, oxidizers.

**Incompatibilities with Other Materials:** Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**Routes of entry:** Ingestion.

**RTECS#:** SO5600000

**LD50/LC50:**

**CAS# 7220-79-3:** No information available.

**CAS# 64-17-5:**

Draize test, rabbit, eye: 500 mg Severe.

Draize test, rabbit, eye: 500 mg/24H Mild.

Draize test, rabbit, skin: 20 mg/24H Moderate.

Inhalation, mouse: LC50 = 39 gm/m<sup>3</sup>/4H.

Inhalation, rat: LC50 = 20000 ppm/10H.

Oral, mouse: LD50 = 3450 mg/kg.  
Oral, rabbit: LD50 = 6300 mg/kg.  
Oral, rat: LD50 = 7060 mg/kg.  
Oral, rat: LD50 = 9000 mg/kg; <BR.

CAS# 67-56-1

Rabbit oral: 5628  
Rabbit skin: 15800  
Rabbit inhalation: 64000/ 4 hours.

**Carcinogenicity:**

CAS# 7220-79-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 64-17-5 Ethyl Alcohol: Not listed by ACGIH, NTP, IARC or CA Prop 65

CAS# 67-56-1 Methyl Alcohol: Not listed by ACGIH, NTP, IARC or CA Prop 65

**Route of exposure:**

**Multiple routes:** May be harmful by inhalation, ingestion, or skin absorption. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Basic Fuchsin and Phenol are cancer suspect agents.

Section 12 - Ecological Information
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**Ecotoxicity:**

CAS# 569-61-9: Basic Fuchsin: Not Available

CAS# 108-95-2: Phenol: Ecotoxicity in water (LC50): 125mg/l 24 hours [Fish (Goldfish)]. >50mg/l 1 hours [Fish (Fathead minnow)]. >50mg/l 24 hours [Fish (Fathead minnow)]. >33mg/l 72 hours [(Fathead minnow)]. >33ppm 96 hours [Fish (Fathead minnow)].

CAS# 64-17-5 Ethyl Alcohol: 14000 mg/l 96 hours [Rainbow trout]. 11200 mg/l 24 hours [fingerling trout].

CAS# 67-56-1 Methyl Alcohol: 29400 mg/l 96 hours [Fathead minnow].

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation are less toxic than the product itself.

Section 13 - Disposal Considerations
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**Appropriate method of disposal of substance or preparation:**

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved wasted facility.

## Section 14 – Transport Information

### **DOT**

Proper shipping name: Alcohols, N.O.S.

UN1987

PG II

Hazard class 3 (flammable)

## Section 15 - Regulatory Information

### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

### **European/International Regulations**

#### **European Labeling in Accordance with EC Directives**

#### **Hazard Symbol:**

F

#### **Risk Phrases:**

R20/21/22 Harmful in contact with skin and if swallowed

R36/38 Irritating to eyes and skin

R42/43 May cause sensitization by inhalation and skin contact

R48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed

R61 May cause damage to the unborn child

R52 Harmful to aquatic organisms

#### **Safety Phrases:**

S3/7/9 Keep container closed in a cool, well-ventilated place

S24/25 Avoid contact with skin and eyes

S20/21 When using do not eat, drink or smoke

S2 Keep out of the reach of children.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S28 After contact with skin, wash immediately with plenty of soap and water

S37/39 Wear suitable gloves and eye/face protection

S29/35 Do not empty into drains; dispose of this material and its container in a safe way

## Section 16 - Additional Information

**MSDS Creation Date:** 1/18/11

**Revision #1 11/25/14**

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