



ALDON CORPORATION

1533 W. Henrietta Rd.
Avon, New York 14414
(716) 226-6177

MSDS No. MM 451
Effective Date December 18, 1996

Fisher MATERIAL SAFETY DATA SHEET

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	METHYLENE BLUE SOLUTION (LOEFFLER'S)	 CHEMTREC 800-424-9300 Day 716-226-6177 NFPA HAZARD RATING LEAST SLIGHT MODERATE 0 1 2 3 4 HMIS* Health 2 Fire 2 Reactivity 0
Chemical Synonyms	Loeffler's Methylene Blue Stain	
Formula	Mixture.	
Unit Size	up to 4 Liters.	
C.A.S. No.	Mixture.	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Methylene Blue Hydrochloride: (CAS No. 61-73-4)	0.38%	None established.
Potassium Hydroxide: (CAS No. 1310-58-3)	0.0076%	C 2 (See Section V).
* Ethyl Alcohol, Denatured: (CAS No. 84-17-5)	22%	1000 ppm; 1860 mg/m ³
Water: (CAS No. 7732-18-5)	77.6%	

CAUTION! COMBUSTIBLE! MAY BE HARMFUL

IF SWALLOWED, MAY CAUSE IRRITATION.

SECTION III PHYSICAL DATA

Melting Point (°F)	Approx. -13°C (8.6°F)	Specific Gravity (H₂O = 1)	Approx. 1.0
Boiling Point (°F)	86.6°C (188°F)	Percent Volatile by Volume (%)	Approx. 99%
Vapor Pressure (mm Hg)	Ca 42 @ 68°F (Et. Alc.)	Evaporation Rate (n-Butyl Ac. = 1)	Greater than 1.
Vapor Density (Air=1)	0.96199 @ 25°C (Et. Alc.)		
Solubility in Water	Complete.		
Appearance & Odor	Clear blue liquid with an alcohol odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	33°C (92°F) (TCC)	Flammable Limits in Air % by Volume	Lower: 3.3	Upper: 19.0
Extinguisher Media	Water spray; carbon dioxide (CO ₂); dry chemical; alcohol-type or universal-type foams.			

SPECIAL FIREFIGHTING PROCEDURES

If involved in fire situation, wear a NIOSH/MSHA-approved self-contained breathing apparatus. Use flooding amounts of water in early stages of fire.

* Denaturants:
Methanol: (CAS No. 67-56-1)
Ethyl acetate: (CAS No. 141-78-6)
Methyl Isobutyl Ketone: (CAS No. 108-10-1)
Rubber Hydrocarbon Solvent: (CAS No. 64742-89-3)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products of oxides of nitrogen (NO_x) and sulfur (SO_x); can react with strong oxidizing materials. Flames may not be visible in daylight.

D.O.T. NON-REGULATED.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

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Threshold Limited Value None established for this mixture. TWA for Potassium Hydroxide; Ceiling limit 2 mg/m³. **5-67697**

Effects of Overexposure **INGESTION:** Causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait, and coma. **SKIN ABSORPTION:** Exposure has produced photosensitization in humans. **INHALATION:** May cause dizziness, drowsiness, nausea and vomiting. **EYES:** Has caused corneal and conjunctive injury in test animals.

Emergency and First Aid Procedures

INGESTION: Do NOT give anything by mouth to an unconscious or very drowsy person. If conscious, give two glasses of water to drink, induce vomiting. Repeat until vomit fluid is clear. Call physician immediately. **SKIN:** Flush with water. **INHALATION:** Remove to fresh air. Give artificial respiration if not breathing. Oxygen may be given by qualified personnel if breathing is difficult. Obtain medical attention. **EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Heat, fire, ignition source, protect from light.
	Stable	X		

Incompatibility (Materials to Avoid) Strong oxidizing and reducing agents may destroy color.

Hazardous Decomposition Products When heated to decomposition, emits toxic fumes of oxides of nitrogen (NO_x) and sulfur (SO_x), and other potentially toxic fumes.

Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	X
	Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Absorb spill in vermiculite, sand, earth, paper towel and place in a suitable container for disposal. Wash spill area with soap and water.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in an approved chemical incinerator or chemical landfill or contract with a licensed waste disposal agency.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None needed in normal laboratory handling. If misty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved respirator.

Ventilation	Local Exhaust	Not required.	Special	No.
	Mechanical (General)	Not required.	Other	No.

Protective Gloves Rubber. **Eye Protection** Chemical safety glasses.

Other Protective Equipment Lab coat, apron, eye wash station, proper gloves.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool place and protect from light. Keep away from heat, sparks and flame. Wash thoroughly after handling. Keep container tightly closed when not in use.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals.

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 4 | Date: 12/18/96 | Approved: Michael Raszeja | Chemical Safety Coordinator: MR

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