



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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

MSDS No. MM 451
Effective Date January 20, 1998

SECTION V HEALTH HAZARD DATA MM 451

Threshold Limited Value Ethyl Alcohol TWA: 1000 ppm; 1880mg/m³ (Air). Methanol TWA: 200ppm; 262 mg/m³ (skin); Ethyl Acetate TWA: 400 ppm; 1440mg/m³ (Air), TWA for Potassium Hydroxide: Ceiling limit 2 mg/m³. (ACGIH 1992-93)

Effects of Overexposure **INGESTION:** Causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait, and coma. **SKIN CONTACT:** Irritation and defatting of skin on prolonged contact. **INHALATION:** May cause dizziness, drowsiness, nausea and vomiting, inability to concentrate and irritation of the throat. **EYE CONTACT:** May cause blindness.

Emergency and First Aid Procedures **INGESTION:** Do NOT give anything by mouth to an unconscious or very drowsy person. If conscious, have victim drink several glasses of water. Call physician or Poison Control Center immediately. Induce vomiting if advised by physician or Poison Control Center. **SKIN:** Flush thoroughly with water, then wash with mild soap and 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:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate 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		Not applicable.
	May Occur	Will Not Occur	
		X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Remove all sources of ignition, provide adequate ventilation. 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 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	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.
Protective Gloves	Rubber.		Eye Protection	Chemical safety glasses.
Other Protective Equipment	Lab coat, apron, eye wash station, proper gloves, goggles, fire extinguisher.			

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. Use with adequate ventilation. Remove and wash contaminated clothing.

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

Revision No.5	Date 1/20/98	Approved Michael Raszeja	Chemical Safety Coordinator MR
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The information contained herein is furnished without warranty of any kind. Employees should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards. Printed on recycled paper.

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	METHYLENE BLUE SOLUTION (LOEFFLER'S)	<p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS *</p> <table border="1"> <tr> <td>Health</td> <td>3</td> </tr> <tr> <td>Fire</td> <td>4</td> </tr> <tr> <td>Reactivity</td> <td>2</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	3	Fire	4	Reactivity	2
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
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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)	0.5%	None established.
Potassium Hydroxide: (CAS No. 1310-58-3)	0.04%	C 2 (See Section V).
* Ethyl Alcohol, Denatured: (CAS No. 64-17-5)	99.5%	1000 ppm; 1880 mg/m3

DANGER! FLAMMABLE! MAY BE HARMFUL

IF SWALLOWED. MAY CAUSE IRRITATION.

SECTION III PHYSICAL DATA

Melting Point (°F)	-113°C (-173°F)*	Specific Gravity (H₂O = 1)	0.814 @ 60°F
Boiling Point (°F)	75-80°C (163-174°F)*	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	Ca 44.6 @ 68°F*	Evaporation Rate (n-Butyl Ac.=1)	4.1
Vapor Density (Air=1)	CA 1.59*		
Solubility in Water	Complete.		
Appearance & Odor	Clear, blue, mobile liquid; mild characteristic odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	10°C (50°F) (TCC)	Flammable Limits in Air % by Volume	Lower	Upper
		Et. Alc.	3.3	19.0

Extinguisher Media Water spray; carbon dioxide (CO₂); 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. 64742-89-8)

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.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 128)

D.O.T. **Flammable liquids, n.o.s., (Ethyl alcohol), 3, UN 1993 PG II**

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