



**MACSEN DRUGS**  
**F-261,262,263 RIICO INDUSTRIAL AREA**  
**GUDLI, TEHSIL-MAVLI, UDAIPUR – 3130024**



## **MATERIAL SAFETY DATA SHEET**

### **SECTION 1: IDENTIFICATION**

**Product Name:** Methylthioninium Chloride / Methylene Blue

**CAS#:** 122965-43-9

**RTECS No. :** SO5600000

**Chemical Name:** Phenothiazin-5-ium, 3,7bis (dimethylamino) -, chloride.

**Chemical Formula:** :  $C_{16}H_{18}N_3S.Cl.xH_2O$

#### **Details of the supplier of the safety data sheet**

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**Village-GUDLI, TEHSIL-MAVLI,**

**Udaipur – 3130024 (INDIA)**

#### **Emergency Telephone Number**

**+91-7296866111**

### **SECTION 2: HAZARDS IDENTIFICATION**

**Physical Hazards:**

Not Classified

**Health Hazards:**

Acute toxicity, oral

Category 4

Serious eye damage/eye irritation

Category 2A

**OSHA Hazards**

Not classified

#### **Label elements**



**Signal word**

Warning

**Hazard statement**



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<b>H302</b>	Harmful if swallowed.
<b>H315</b>	Causes skin irritation.
<b>H319</b>	Causes serious eye irritation.
<b>H335</b>	May cause respiratory irritation.
<b>Precautionary statement(s)</b>	
<b>P261</b>	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	Not available.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b><u>Hazard(s) not otherwise classified (HNOC)</u></b>	Not classified.

<b>SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS</b>
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Chemical Name	Common name & Synonyms	CAS Number	% by weight
Methylene Blue	Methylthioninium chloride	7220-79-3	100

<b>SECTION 4: FIRST AID MEASURES</b>
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<b>Inhalation</b>	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and</b>	Irritation of eyes and mucous membranes



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delayed

**Indication of immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically. For hypotension, infuse 10- 20mL/kg isotonic fluid. Administer dopamine or norepinephrine if hypotension persists. For seizures, administer benzodiazepine intravenously. Administer oxygen to cyanotic patients. In severe cases, treatment with hyperbaric oxygen and exchange transfusion may be necessary. Manage airway. (Poisindex)

**General information**

Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

**General Advice:**

If symptoms persist, call a physician.

<b>SECTION 5: FIRE AND EXPLOSION DATA</b>
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**Suitable extinguishing media**

Water spray, dry chemical, carbon dioxide, or foam as appropriate for surrounding fire and materials.

**Unsuitable extinguishing Media**

None known.

**Specific hazards arising from the chemical**

No unusual fire or explosion hazards noted.

**Special protective equipment and precautions for fire-fighters**

As with all fires, evacuate personnel to a safe area. Fire-fighters should use self-contained breathing equipment and protective clothing.

**Fire-fighting equipment/instructions**

Cool containers exposed to flames with water until well after the fire is out.

**Specific methods**



## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions,** Keep unnecessary personnel away. Do not touch damaged containers  
**or protective equipment and** spilled material unless wearing appropriate protective clothing. Ensure  
**emergency procedures.** adequate ventilation. Avoid inhalation of dust from the spilled material.

Wear appropriate personal protective equipment

**Methods and materials for** Sweep up or vacuum up spillage and collect in suitable container for  
**containment and cleaning up** disposal. Avoid the generation of dusts during clean-up. For waste disposal,  
see section 13 of the SDS. Wash spill site.

## **SECTION 7: HANDLING AND STORAGE**

**Precautions for safe** Wear personal protective equipment. Ensure adequate ventilation. Avoid  
**handling** dust formation. Do not get in eyes, or skin, or on clothing. Avoid ingestion  
and inhalation.

**Condition for safe Storage,** Keep container dry. Keep in a cool place. Ground all equipment  
containing **including any incompatibility** material. Keep container tightly closed. Keep in a cool, well-  
ventilated  
place.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Biological limit value** No biological exposure noted for the ingredient.

**Exposure guidelines** No exposure standards allocated.

**Appropriate engineering**

**Controls** Airborne exposure should be controlled primarily by engineering controls  
such as general dilution ventilation, local exhaust ventilation, or process  
enclosure. Local exhaust ventilation is generally preferred to general exhaust  
because it can control the contaminant at its source, preventing dispersion  
into the work area. An industrial hygiene survey involving air monitoring



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may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials. Local exhaust ventilation such as a laboratory fume hood or other vented enclosure is recommended, particularly for grinding, crushing, weighing, or other dust-generating procedures.

**Personal Protection**

Splash goggles, Lab coat, Dust respirator, be sure to use an approved/certified respirator or equivalent, Gloves.

**Individual protection**

Safety glasses with sideshields are recommended. Face shields or goggles measures, such as may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA equipment Eye/face stamp) is preferred. Maintain eyewash facilities in the work area.

**protection**

**Skin protection**

Chemically compatible gloves. For handling solutions, ensure that the glove

**Hand protection**

material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic non-latex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

**Other**

For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing may be necessary to prevent take-home contamination.

**Respiratory protection**

No protective equipment is needed under normal use condition.

**Thermal hazards**

Not available.

**General hygiene**

Handle in accordance with good industrial hygiene and safety practice.

**Considerations**

<b>SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES</b>
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|--------------------------|------------|
| 1. <b>Appearance</b>     | Dark Green |
| 2. <b>Physical state</b> | Solid      |
| 3. <b>Form</b>           | Crystal    |



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4. **Odor** Odorless or slight odor
5. **Odour Threshold:** Not available
6. **pH** Not available
7. **Decomposition** 190°C
8. **Temperature**
9. **Boiling Point** Not available
10. **Molecular Weight** 373.89 g/mole
11. **Critical Temperature** Not available
12. **Specific Gravity:** Not available
13. **Vapour Pressure:** Negligible
14. **Vapour Density:** Not available
15. **Volatility:** Not available
16. **Solubility:** Slightly soluble in water.
17. **Other information**
  - **Molecular formula**  $C_{16}H_{18}N_3S.Cl$
  - **Solubility (Other)** Soluble in chloroform; sparingly soluble in alcohol

<b>SECTION 10: STABILITY AND REACTIVITY DATA</b>
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<b>Reactivity</b>	No reactivity hazards known.
<b>Chemical stability</b>	Stable at normal conditions.
<b>Possibility of hazardous</b>	No dangerous reaction known under conditions of normal use.
<b>Reactions</b>	
<b>Conditions to avoid</b>	None known.
<b>Stability:</b>	The product is stable under normal condition.
<b>Instability Temperature:</b>	Not available.
<b>Conditions of Instability:</b>	Not available.
<b>Incompatibility with:</b>	Strong oxidizing agents.
<b>Polymerization:</b>	Hazardous polymerization does not occur.
<b>Hazardous Reaction:</b>	None under normal processing



## **SECTION 11: TOXICOLOGICAL INFORMATION**

Routes of Entry	Eye contact, Inhalation, Ingestion.	
Information on likely route of exposure		
Ingestion	Harmful if swallowed	
Inhalation	Due to lack of data the classification is not found	
Skin contact	Due to lack of data the classification is not found	
Eye contact	Causes serious eye irritation	
Symptoms related to the physical, chemical, and toxicology characteristics	Gastrointestinal disturbances. Blue or blue green discoloration of skin, urine, and stools. Blue or pale lips, fingernails & skin. Painful or difficult urination. Abdominal pain. Anxiety. Chest pain. Confusion. Back pain. Leg pain. Fever. Difficult breathing. Dizziness. Head ache. Tiredness. Weakness. Nausea. Vomiting. Sweating. Tremor.	
Product	Species	Test results
Methylene Blue (CAS7220-79-3)		
Oral		
LD50	Mouse	3500mg/kg, (anhydrous)
	Rat	1180mg/kg, (anhydrous)
Skin corrosion/irritation	Due to lack of data the classification is not possible.	
Serious eye damage/eye Irritation	Causes serious eye irritation.	
Local effects		
Irritancy test		
Result: -Irritant;	Temporary corneal and conjunctival injury.	
Species	Rabbit	
Organ	Eyes	
Respiratory sensitization	Due to lack of data the classification is not possible.	
Skin sensitization	Based on available data, the classification criteria are not met.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met. Results of genotoxicity tests in vivo were negative. Results of genotoxicity tests in vitro are positive.	



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<b>Irritation</b>	Irritating to eyes, respiratory system and skin.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. 25 mg/kg Carcinogenicity study
<b>Result</b>	A marginally increased incidence of malignant lymphoma in female mice. An increased incidence of carcinoma and adenoma or carcinoma (combined) and an increased incidence of malignant lymphoma in male rats.
<b>Species</b>	Mouse
<b>Test Duration</b>	2 years 50 mg/kg Carcinogenicity study
<b>Result</b>	No evidence of carcinogenicity in female rats. An increased incidence of pancreatic islet cell adenoma and adenoma or carcinoma (combined) in male rats.
<b>Species</b>	Rat
<b>Test Duration</b>	2 years

<b>SECTION 12: ECOLOGICAL INFORMATION</b>
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<b>Ecotoxicity:</b>	Do not empty into drains.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	Not available.
<b>Mobility in soil</b>	Not available.
<b>Other adverse effects</b>	Not available.





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### SECTION 13: DISPOSAL CONSIDERATIONS

<b>Disposal instructions</b>	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Not available.
<b>Hazardous waste code</b>	Not available.
<b>Waste from residues / unused Products</b>	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### SECTION 14: TRANSPORT INFORMATION

<b>DOT Classification</b>	Not regulated
<b>TDG</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated

### SECTION 15: OTHER REGULATORY INFORMATION

<b>Federal And State Regulation</b>	TSCA 12(b) inventory: No products were found.
<b>Safe Drinking Water Act (SDWA)</b>	Not regulated.
<b>Food and Drug</b>	Not regulated.



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**Administration (FDA)**

<b>SARA 313</b>	Not Applicable
<b>CWA (Clean water act)</b>	Not Applicable
<b>Clean air duct</b>	Not Applicable
<b>OSHA</b>	Not Applicable

<b>SECTION 16: OTHER INFORMATION</b>
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<b>Prepared By</b>	Quality Assurance Department
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<b>Creation Date</b>	27/09/2021
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<b>Further Information</b>	Not Available
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<b>Other Special</b>	Not available
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**Considerations**

<b>Revision Information</b>	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.
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