

Material Safety Data Sheets

1. IDENTIFICATION

Product Name	Methylene blue
Other Names	3,7-bis(Dimethylamino)phenazathionium chloride, Tetramethylthionine chloride, Methylene Blue hydrate
Uses	No Data Available
Chemical Family	No Data Available
Chemical Formula	C ₁₆ H ₁₈ CIN ₃ S · xH ₂ O
Chemical Name	No Data Available
Product Description	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Hazard Categories	Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Signal Word	Warning	
Hazard Statements	H302	Harmful if swallowed.
Precautionary Statements	P264 P270 P301 + P312 P501	Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Dispose of contents/ container to an approved waste disposal plant.
Symbol		

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Methylene blue	C16H18ClN3S · xH2O	122965-43-9	<= 100 %

4. FIRST AID MEASURES

Swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Eye	After eye contact: rinse out with plenty of water. Remove contact lenses.
Skin	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Inhaled	After inhalation: fresh air.
Advice to Doctor	Consult a doctor in case of discomfort showing the SDS for the product.

5. FIRE FIGHTING MEASURES

General Measures	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire. extinguishing water from contaminating surface water or the ground water system.
Flammability Conditions	No Data Available
Extinguishing Media	Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder
Fire and Explosion Hazard	Fire may cause evolution of: Sulfur oxides, nitrogen oxides, Hydrogen chloride gas. Development of hazardous combustion gases or vapours possible in the event of fire.
Hazardous Products of Combustion	Carbon oxides; Nitrogen oxides (NOx) ;Sulfur oxides ;Hydrogen chloride gasCombustible.
Special Fire Fighting Instructions	In the event of fire, wear self-contained breathing apparatus.
Personal Protective Equipment	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	No Data Available
Clean Up Procedures	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Containment	No Data Available
Decontamination	No Data Available
Environmental Precautionary Measures	Do not let product enter drains.
Evacuation Criteria	No Data Available
Personal Precautionary Measures.	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

7. HANDLING AND STORAGE

Handling	No Data Available
Storage	No Data Available
Container	Keep containers tightly closed

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.
Exposure Limits	No Data Available
Biological Limits	No Data Available
Engineering Measures	Change contaminated clothing. Wash hands after working with substance.
Personal Protection Equipment	Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. Eye/face protection Eye glasses with side protection DIN-/EN-Norms EN 166 Recommendation: VWR 111-0432 Skin protection When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms EN ISO 374 In the case of wanting to use the gloves again, clean them before taking off and air them well. Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatrill® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatrill® L Respiratory protection Respiratory protection necessary at: aerosol or mist formation Suitable respiratory protection apparatus: Full-/half-/quarter-face masks (EN 136/140) Recommendation: Suitable material: ABEK2P3
Special Hazards Precautions	No Data Available
Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	solid
Appearance	solid
Odour	odorless
Colour	dark blue
pH	. 3 at 10 g/l at 20 °C
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	180 ° C - (decomposition)
Freezing Point	No Data Available
Solubility	Water solubility : 50 g/l at 20 °C
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No information available.
Evaporation Rate	No Data Available
Bulk Density	400-600 kg/m3
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	620.47 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No Data Available
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	No information available.
Reactions That Release Gases or Vapours	No information available.
Release of Invisible Flammable Vapours and Gases	No information available. No information available.

10. STABILITY AND REACTIVITY

General Information	Violent reactions possible with: Strong oxidizing agents; Bases; Reducing agents alkali compounds; Iodides; potassium dichromate
Chemical Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Conditions to Avoid	Strong heating (decomposition). no information available
Materials to Avoid	Strong oxidizing agents; Bases; Reducing agents; alkali compounds; Iodides; potassium dichromate
Hazardous Decomposition Products	No Data Available
Hazardous Polymerisation	No Data Available

11. TOXICOLOGICAL INFORMATION

General Information	No Data Available
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Acute	Acute toxicity LD50 Oral - Rat - 1.180 mg/kg Oral: Harmful if swallowed. Inhalation: No data available Dermal: No data available
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12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity	
	Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 45 mg/l - 96 h Remarks: (anhydrous substance) (ECOTOX Database)
	No data available	
	Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 2.260 mg/l - 48 h Remarks: (anhydrous substance) (ECOTOX Database)
Persistence/Degradability	No Data Available	
Mobility	No Data Available	
Environmental Fate	No Data Available	
Bioaccumulation Potential	No Data Available	
Environmental Impact	No Data Available	

13. DISPOSAL CONSIDERATIONS

General Information No Data Available

Special Precautions for Land Fill No Data Available

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Methylene blue
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

Proper Shipping Name	Methylene blue
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available

Marine Pollutant No Data Available

Air Transport

Proper Shipping Name	Methylene blue
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

15. OTHER INFORMATION

Revision

3

Key/Legend

< Less Than
 > Greater Than
 atm Atmosphere
 CAS Chemical Abstracts Service (Registry Number)
 cm² Square Centimetres
 CO₂ Carbon Dioxide
 COD Chemical Oxygen Demand
 deg C (° C) Degrees Celcius
 deg F (° F) Degrees Farenheit
 g Grams
 g/cm³ Grams per Cubic Centimetre
 g/l Grams per Litre
 HSNO Hazardous Substance and New Organism
 IDLH Immediately Dangerous to Life and Health
 immiscible Liquids are insoluable in each other.
 inHg Inch of Mercury
 inH₂O Inch of Water
 K Kelvin
 kg Kilogram
 kg/m³ Kilograms per Cubic Metre
 lb Pound
 LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
 LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
 ltr or L Litre
 m³ Cubic Metre
 mbar Millibar
 mg Milligram
 mg/24H Milligrams per 24 Hours
 mg/kg Milligrams per Kilogram
 mg/m³ Milligrams per Cubic Metre
 Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
 mm Millimetre
 mmH₂O Millimetres of Water
 mPa.s Millipascals per Second
 N/A Not Applicable
 NIOSH National Institute for Occupational Safety and Health
 NOHSC National Occupational Heath and Safety Commission
 OECD Organisation for Economic Co-operation and Development
 Oz Ounce
 PEL Permissible Exposure Limit
 Pa Pascal
 ppb Parts per Billion
 ppm Parts per Million
 ppm/2h Parts per Million per 2 Hours
 ppm/6h Parts per Million per 6 Hours
 psi Pounds per Square Inch
 R Rankine
 RCP Reciprocal Calculation Procedure
 STEL Short Term Exposure Limit
 TLV Threshold Limit Value
 tne Tonne
 TWA Time Weighted Average
 ug/24H Micrograms per 24 Hours
 UN United Nations
 wt Weight