

## Chemical Safety Data Sheet MSDS / SDS

## Methylene Blue

Revision Date:2026-04-25 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

Product name : Methylene Blue  
CBnumber : CB2748858  
CAS : 61-73-4  
EINECS Number : 200-515-2  
Synonyms : methylene blue,METHYLTHIONINIUM CHLORIDE

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

**Precautionary statements**

P264 Wash skin thoroughly after handling.

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

P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P501 Dispose of contents/container to.....

**Hazard statements**

H302 Harmful if swallowed

## SECTION 3: Composition/information on ingredients

**Substance**

Product name	: Methylene Blue
Synonyms	: methylene blue, METHYLTHIONINIUM CHLORIDE
CAS	: 61-73-4
EC number	: 200-515-2
MF	: C16H18ClN3S
MW	: 319.85

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## SECTION 4: First aid measures

### **If inhaled**

After inhalation: fresh air.

### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

### **In case of eye contact**

After eye contact: rinse out with plenty of water. Remove contact lenses.

### **If swallowed**

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### **Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### **Protection of first-aiders**

For personal protection see section 8.

### **Notes to physician**

No data available

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## SECTION 5: Firefighting measures

### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### **Specific hazards during fire fighting**

Not combustible. Ambient fire may liberate hazardous vapours.

### **Hazardous combustion products**

Nature of decomposition products not known.

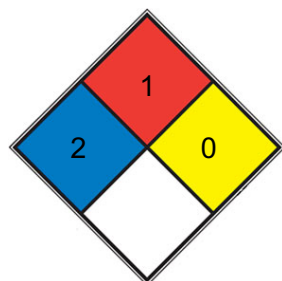
## Specific extinguishing methods

Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

## NFPA 704



**HEALTH** 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

**FIRE** 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

**REACT** 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

**SPEC.**

**HAZ.**

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Che- mizorb®). Dispose of properly. Clean up affected area.

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## SECTION 7: Handling and storage

### Handling

For precautions see section 2.2.

## Storage

### Further information on storage conditions

Tightly closed.

### Storage class

12, Non Combustible Liquids

### Recommended storage temperature

Recommended storage temperature see product label.

### Packaging material

Suitable material: Amber Glass Bottle/Jar

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

Not required; except in case of aerosol formation.

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Safety glasses

#### Hand protection

#### Remarks

not required

#### Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

liquid

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#### Color

Green

#### Odor

Odorless

#### Odor Threshold

No data available

### **pH**

No data available

### **Melting point/ range**

No data available

### **Boiling point/boiling range**

No data available

### **Flash point**

45 °C

### **Evaporation rate**

No data available

### **Flammability (solid, gas)**

No data available

### **Flammability (liquids)**

The product is not flammable.

### **Burning rate**

No data available

### **Self-ignition**

Not applicable

### **Upper explosion limit / Upper flammability limit**

Not applicable

### **Lower explosion limit / Lower flammability limit**

Not applicable

### **Vapor pressure**

No data available

### **Relative vapor density**

No data available

### **Relative density**

1.0 g/mL at 20 °C

### **Density**

0.98 g/mL (25 °C)

**Water solubility**

soluble (20 °C)

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

Not applicable

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

**Molecular weight**

319.85 g/mol

**Particle characteristics Particle size**

No data available

**Solubility**

Soluble in water, ethanol, ethylene glycol, methyl cellosolve

**Physical state**

Liquid

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**SECTION 10: Stability and reactivity****Reactivity**

No data available

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

### **Possibility of hazardous reactions**

Violent reactions possible with: The generally known reaction partners of water.

### **Conditions to avoid**

no information available

### **Incompatible materials**

No data available

### **Hazardous decomposition products**

In the event of fire: see section 5

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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Mixture Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

#### **Skin corrosion/irritation**

Classified based on available data. For more details, see section 2

#### **Serious eye damage/eye irritation**

Classified based on available data. For more details, see section 2

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

### **11.2 Additional Information**

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

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## SECTION 12: Ecological information

### **Ecotoxicity**

No data available

### **Persistence and degradability**

No data available

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

### **Disposal methods**

#### **Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

### **International Regulations**

#### **IATA-DGR**

UN/ID No. : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Packing instruction (cargo aircraft) : Not applicable

Packing instruction (passenger aircraft) : Not applicable

#### **IMDG-Code**

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : no

### **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

### **National Regulations**

#### **JT/T 617**

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Environmentally hazardous : no

### **Special precautions for user**

Remarks : Not classified as dangerous in the meaning of transport regulations.

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## **SECTION 15: Regulatory information**

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals and it does not meet the definition of hazardous chemicals and its principles of determination.

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### **National regulatory information**

#### **Regulations on Safety Management of Hazardous Chemicals**

#### **Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)**

Not listed

#### **Hazardous Chemicals for Priority Management**

Not listed under SAWS

#### **Catalogue of Specially Controlled Hazardous**

Not listed Chemicals

#### **List of Explosive Precursors**

Not listed

#### **Regulations on Labour Protection in Workplaces where Toxic Substances are Used**

## **Catalogue of Highly Toxic Chemicals**

Not listed

## **Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

### **China Severely Restricted Toxic Chemicals for Import and Export**

Not listed

## **Measures on the Environmental Administration of New Chemical Substances Registration**

### **Registration/Notification number**

B1A122214038 B1A222223342

## **Regulation on the Administration of Precursor Chemicals**

### **Catalogue and Classification of Precursor Chemicals**

Not listed

## **Regulations on the Administration of Controlled Chemicals**

### **List of Controlled Chemicals**

Not listed

## **Regulations of Ozone Depleting Substances Management**

### **List of Controlled Ozone Depleting Substances**

Not listed

### **List of Controlled Ozone Depleting Substances Import and Export**

Not listed

## **Environmental Protection Law**

### **List of Priority Controlled Chemicals**

Not listed

### **List of Key Controlled New Pollutants**

Not listed

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## **SECTION 16: Other information**

### **Full text of other abbreviations**

AllC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil  
 ASTM - American Society for the Testing of Materials  
 bw - Body weight  
 CMR - Carcinogen, Mutagen or Reproductive Toxicant  
 DIN - Standard of the German Institute for Standardisation  
 DSL - Domestic Substances List (Canada)  
 EC<sub>x</sub> - Concentration associated with x% response  
 EL<sub>x</sub> - Loading rate associated with x% response  
 EmS - Emergency Schedule  
 ENCS - Existing and New Chemical Substances (Japan)  
 ErC<sub>x</sub> - Concentration associated with x% growth rate response  
 ERG - Emergency Response Guide  
 GHS - Globally Harmonized System  
 GLP - Good Laboratory Practice  
 IARC - International Agency for Research on Cancer  
 IATA - International Air Transport Association  
 IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  
 IC<sub>50</sub> - Half maximal inhibitory concentration  
 ICAO - International Civil Aviation Organization  
 IECSC - Inventory of Existing Chemical Substances in China  
 IMDG - International Maritime Dangerous Goods  
 IMO - International Maritime Organization  
 ISHL - Industrial Safety and Health Law (Japan)  
 ISO - International Organisation for Standardization  
 KECI - Korea Existing Chemicals Inventory  
 LC<sub>50</sub> - Lethal Concentration to 50 % of a test population  
 LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose)  
 MARPOL - International Convention for the Prevention of Pollution from Ships  
 n.o.s. - Not Otherwise Specified  
 Nch - Chilean Norm  
 NO(A)EC - No Observed (Adverse) Effect Concentration  
 NO(A)EL - No Observed (Adverse) Effect Level  
 NOELR - No Observable Effect Loading Rate  
 NOM - Official Mexican Norm  
 NTP - National Toxicology Program  
 NZIoC - New Zealand Inventory of Chemicals  
 OECD - Organization for Economic Co-operation and Development  
 OPPTS - Office of Chemical Safety and Pollution Prevention  
 PBT - Persistent, Bioaccumulative and Toxic substance  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 (Q)SAR - (Quantitative) Structure Activity Relationship  
 REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
 SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - TaiwanChemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI -Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (UnitedStates)

UN - United Nations

UNRTDG - United Nations Recommendations on theTransport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.