



TOKYO CHEMICAL INDUSTRY CO., LTD.

Methylene Blue Solution (Methanol Solution) [for Cell Staining]

Revision 1
number:

Revision date: 10/17/2018

Page 1 of 5

Revision date: 10/17/2018

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Methylene Blue Solution (Methanol Solution) [for Cell Staining]
Product code: M2392
Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
Address: 4-10-2, Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan
Responsible department: Global Business Department
Telephone: +81-3-5640-8872
Fax: +81-3-5640-8902
e-mail: globalbusiness@TCIchemicals.com
Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids

Category 2

HEALTH HAZARDS

Serious eye damage/eye irritation

Category 2A

Reproductive toxicity

Category 1B

Specific target organ toxicity

Central nervous system

- Single exposure [Category 1]

Specific target organ toxicity

Respiratory tract irritation, Narcotic effects

- Single exposure [Category 3]

Specific target organ toxicity

Visual system, Central nervous system

- Repeated exposure [Category 1]

ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

Highly flammable liquid and vapour
Causes serious eye irritation
May damage fertility or the unborn child
Causes damage to organs : Central nervous system
Causes damage to organs through prolonged or repeated exposure : Visual system Central nervous system
May cause respiratory irritation
May cause drowsiness or dizziness

Precautionary statements

[Prevention]

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
Do not breathe mist, vapors or spray.
Use only outdoors or in a well-ventilated area.
Do not eat, drink or smoke when using this product.
Wash hands and face thoroughly after handling.

[Response]	Wear protective gloves, protective clothing, face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
[Storage]	If exposed or concerned: Call a POISON CENTER or doctor. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
[Disposal]	Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Mixture
Components:	Methylene Blue Solution (Methanol Solution) [for Cell Staining]
Percent:
CAS RN:	61-73-4
Synonyms:	3,7-Bis(dimethylamino)-5-phenothiazinium Chloride Solution (Methanol Solution) , Basic Blue 9 Solution (Methanol Solution)
Chemical Formula:	C ₁₆ H ₁₈ ClN ₃ S
Notice Through Official Gazettes Reference Number	
ENCS:	(5)-1995
ISHL:	Official announcement chemistry substance.

4. FIRST-AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.
Ingestion:	Call a POISON CENTER or doctor/physician. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, water in large amounts, carbon dioxide.
Specific hazards arising from the chemical:	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
Precautions for firefighters:	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.
Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

Advice on safe handling: Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up.

Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Control parameters: (Methanol) 200 ppm

Exposure limits: (Methanol)
ACGIH TLV(TWA):200 ppm (skin)
ACGIH TLV(STEL):250 ppm (skin)
OSHA PEL(TWA):200 ppm

Personal protective equipment

Respiratory protection: Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Liquid

Form: Liquid

Colour: Blue - Black

Odour: No data available

pH: No data available

Melting point/freezing point: No data available
(Methanol) -98°C

Boiling point/range: No data available
(Methanol) 64°C

Flash point: No data available
(Methanol) 12°C

Flammability or explosive limits:

Lower: No data available

Upper: No data available

Relative density: No data available

Solubility(ies):

[Water] No data available

[Other solvents] No data available

Log Pow: (Methanol) -0.82/-0.66

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under proper conditions.

Possibility of hazardous reactions: No special reactivity has been reported.

Conditions to avoid: Spark, Open flame, Static discharge

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx), Hydrogen chloride, Sulfur oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	No data available (Methanol) orl-hmn LDLo:143 mg/kg orl-rat LD50:5600 mg/kg ihl-rat LC50:64000 ppm/4H skn-rbt LD50:15800 mg/kg
Skin corrosion/irritation:	No data available (Methanol) skn-rbt 20 mg/24H MOD
Serious eye damage/irritation:	No data available (Methanol) eye-rbt 40 mg MOD
Germ cell mutagenicity:	No data available (Methanol) dni-hmn-lym 300 mmol/L mmo-smc 12 pph (-S9) mmo-mus-lym 7900 mg/L (+S9) cyt-mus-ipr 75 mg/kg
Carcinogenicity:	
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	No data available
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
Log Pow:	No data available
Soil adsorption (Koc):	No data available
Henry's Law (PaM³/mol):	No data available
Other adverse effects:	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

14. TRANSPORT INFORMATION

Hazards Class:	3: Flammable liquid.
Subsidiary risk:	6.1: Toxic substance.
UN-No:	1230
Proper shipping name:	Methanol solution
Packing group:	II
Specific precautionary transport measures and conditions:	

15. JAPANESE REGULATORY INFORMATION

Fire Defense Law:	Class-4 Alcohols Dangerous grade 2
ISHL(Ordinance on Prevention of Organic Solvent Poisoning):	Second-class organic solvents, etc.
ISHL(Article 57):	Dangerous or Harmful Substances Subject to Be Indicated their Names, etc. (Methanol)
ISHL(Article 57-2):	Dangerous or Harmful Substances Subject to Be Notified their Names, etc. (No.560 Methanol)
ISHL(Enforcement Order of the Industrial Safety and Health Act Appended Table 1):	Inflammable Substances
Law for safety of vessels:	Hazardous materials notification, Schedule form No.1 Flammable liquid
Air Pollution Control Law:	Specified substances (Methanol)

16. OTHER INFORMATION**The reference company name of written contents**

Company:	TOKYO CHEMICAL INDUSTRY CO., LTD.
Address:	4-10-2, Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan
Department:	Global Business Department
Telephone:	+81-3-5640-8872
Fax:	+81-3-5640-8902

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.