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Buy [Methylene Blue Trihydrate](#)

## SAFETY DATA SHEET

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

Product Name Methylene Blue Trihydrate (Methylene Blue Dry Stain)  
CAS Number 7220-79-3  
Recommended Use Laboratory chemicals.  
Uses advised against No Information available.

Details of the supplier of the safety data sheet

#### Company

Lab Alley, LLC  
12501 Pauls Valley Road, Suite A,  
Austin, TX 78737 U.S.A

Telephone 512-668-9918  
Fax 512-886-4008

Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRACK  
International 1-352-323-3500 INFOTRACK

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|   |            |
|---|------------|
| Acute oral toxicity   | Category 4 |
| Skin Corrosion/irritation   | Category 2 |
| Serious Eye Damage/Eye Irritation                                 | Category 2 |
| Specific target organ toxicity (single exposure)                  | Category 3 |
| Target Organs - Respiratory system, Central nervous system (CNS). |            |
| Specific target organ toxicity - (repeated exposure)              | Category 2 |
| Target Organs - Blood.  |            |

#### Label Elements

##### Signal Word

Warning

##### Hazard Statements

Harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
May cause drowsiness or dizziness  
May cause damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

#### Response

Get medical attention/advice if you feel unwell

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse

#### Eyes

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/attention

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

#### Storage

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

None identified

### 3. Composition / information on ingredients

| Component                 | CAS-No    | Weight % |
|---------------------------|-----------|----------|
| Methylene blue trihydrate | 7220-79-3 | > 98     |
| Methylene blue            | 61-73-4   | -        |

### 4. First-aid measures

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Obtain medical attention.

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

#### Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

#### Ingestion

Do not induce vomiting. Call a physician or Poison Control Center immediately.

#### Most important symptoms/effects

No information available.

#### Notes to Physician

Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media** No information available

**Flash Point** Not applicable  
**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Chlorine Nitrogen oxides (NOx) Carbon monoxide (CO) Sulfur oxides Carbon dioxide (CO<sub>2</sub>)

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
2

**Flammability**  
1

**Instability**  
1

**Physical hazards**  
N/A

**6. Accidental release measures**

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.

**Environmental Precautions** Avoid release to the environment.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

**7. Handling and storage**

**Handling** Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light.

**8. Exposure controls / personal protection**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

|  |  |
|--|--|
| Physical State                         | Solid  |
| Appearance                             | Dark green   |
| Odor                                   | Odorless   |
| Odor Threshold                         | No information available   |
| pH                                     | 3 - 4.5 (1 % Solution)   |
| Melting Point/Range                    | 190 °C / 374 °F  |
| Boiling Point/Range                    | No information available   |
| Flash Point                            | Not applicable   |
| Evaporation Rate                       | No information available   |
| Flammability (solid,gas)               | No information available   |
| Flammability or explosive limits       |  |
| Upper                                  | No data available  |
| Lower                                  | No data available  |
| Vapor Pressure                         | negligible   |
| Vapor Density                          | 13 (Air = 1.0)   |
| Relative Density                       | 1.230  |
| Solubility                             | Slightly soluble in water  |
| Partition coefficient; n-octanol/water | No data available  |
| Autoignition Temperature               | No information available   |
| Decomposition Temperature              | No information available   |
| Viscosity                              | No information available   |
| Molecular Formula                      | C <sub>16</sub> H <sub>18</sub> ClN <sub>3</sub> S <sub>3</sub> H <sub>2</sub> O |
| Molecular Weight                       | 373.90   |

**10. Stability and reactivity**

|                                  |  |
|----------------------------------|--|
| Reactive Hazard                  | None known, based on information available   |
| Stability                        | Light sensitive.   |
| Conditions to Avoid              | Avoid dust formation. Protect from light. Excess heat. Exposure to light.  |
| Incompatible Materials           | Oxidizing agents, Reducing agents, Bases   |
| Hazardous Decomposition Products | Chlorine, Nitrogen oxides (NO <sub>x</sub> ), Carbon monoxide (CO), Sulfur oxides, Carbon dioxide (CO <sub>2</sub> ) |
| Hazardous Polymerization         | Hazardous polymerization does not occur.   |
| Hazardous Reactions              | None under normal processing.  |

**11. Toxicological information****Acute Toxicity****Product Information  
Component Information**

| Component      | LD50 Oral          | LD50 Dermal | LC50 Inhalation |
|----------------|--------------------|-------------|-----------------|
| Methylene blue | 1180 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                 |  |
|-----------------|--|
| Irritation      | Irritating to eyes, respiratory system and skin  |
| Sensitization   | No information available   |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component      | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------|-----------|------------|------------|------------|------------|------------|
| Methylene blue | 7220-79-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

|                |         |            |            |            |            |            |
|----------------|---------|------------|------------|------------|------------|------------|
| trihydrate     |         |            |            |            |            |            |
| Methylene blue | 61-73-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

|   |  |
|---|--|
| <b>Mutagenic Effects</b>                          | Mutagenic effects have occurred in experimental animals.   |
| <b>Reproductive Effects</b>                       | Experiments have shown reproductive toxicity effects on laboratory animals.  |
| <b>Developmental Effects</b>                      | No information available.  |
| <b>Teratogenicity</b>                             | No information available.  |
| <b>STOT - single exposure</b>                     | Respiratory system Central nervous system (CNS)  |
| <b>STOT - repeated exposure</b>                   | Blood  |
| <b>Aspiration hazard</b>                          | No information available   |
| <b>Symptoms / effects, both acute and delayed</b> | No information available   |
| <b>Endocrine Disruptor Information</b>            | No information available   |
| <b>Other Adverse Effects</b>                      | The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information. |

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Persistence and Degradability</b> | No information available  |
| <b>Bioaccumulation/ Accumulation</b> | No information available. |
| <b>Mobility</b>                      | No information available. |

## 13. Disposal considerations

|                               |   |
|-------------------------------|---|
| <b>Waste Disposal Methods</b> | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|---|

## 14. Transport information

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

## 15. Regulatory information

### International Inventories

| Component      | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|----------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Methylene blue | X    | X   | -    | 200-515-2 | -      |     | X     | -    | X    | X     | X    |

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

**SARA 311/312 Hazardous Categorization**

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire Hazard                       | No  |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicable

CERCLA  
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals

**State Right-to-Know**

| Component                 | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------------------|---------------|------------|--------------|----------|--------------|
| Methylene blue trihydrate | -             | -          | -            | X        | -            |

**U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D1B Toxic materials  
D2B Toxic materials



## 16. Other information

Date of issue: 02/08/2024  
Revision: None

## 17. Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.