

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: October 3, 2018

SPI Catalog # 02573-AB, 02573-MB

SPI-Chem™ Methylene Blue (Chloride)

Section 1.1: Identification

Chemical Name/Synonyms Methylene Blue; Basic Blue 9; CI 52015

Product or Trade Name SPI-Chem™ Methylene Blue (Chloride)

CAS #'s 7220-79-3

Chemical Formula..... $C_{16}H_{18}ClN_3S \cdot 3H_2O$

Section 1.2: Relevant Uses/Restrictions

Chemical stain used in the microscopy laboratory.

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

Acute oral toxicity (category 4).

2.2 Label elements

Pictogram



Signal Word: Warning

Hazard statements:

H302 Harmful if swallowed

Precautionary statements:

P262 Wash 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.

P330 Rinse mouth

P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

Unknown percentage statements (if needed):

2.3 Hazards Not Otherwise Classified (HNOC): None identified.

Hazardous Material Information System USA

Health 1

Fire Hazard 0

Reactivity 0

Personal Protection

NFPA Rating (estimated)

Health 1

Flammability..... 0

Reactivity 0

Section 3: Composition

3.1 Substances:

Methylene blue CAS # 7220-79-3 EC # 200-515-2 > 98%

Section 4: First Aid Measures

4.1 Description of first aid measures:

Inhalation:

Move to fresh air.

If not breathing, give artificial respiration.

Get medical attention if symptoms occur.

Skin Contact:

Wash off immediately with water and soap and rinse thoroughly.
If skin irritation persists, seek medical attention.

Eye Contact:

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

Ingestion:

Clean mouth with water and afterwards drink plenty of water.
Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed:

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

Section 5: Fire Fighting Measures

5.1 Extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Special hazards arising from the substance or mixture:

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

5.3 Hazardous combustion products:

Hydrogen chloride gas, Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂).

5.4 Advice for firefighters:

Special protective equipment and precautions for firefighters:

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

Section 6: Accidental Release Measures

6.1 Personal precautions:

Use personal protection.
Provide adequate ventilation.
Avoid dust formation.
Keep unprotected persons away.

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper government permits.

6.3 Methods and material for containment and cleaning up:

Sweep up or vacuum up spillage and collect in a suitable container for disposal.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

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

7.2 Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry, cool, and well ventilated place.
Store away from oxidizing agents.

7.3 Specific end uses:

Chemical stain for use in the microscopy laboratory.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection:

Workplace exposure limits:

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

Biological limit values: No data available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

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

8.2.2 Individual protection measures:

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: Long sleeved clothing.

Respiratory protection: No protective equipment is needed under normal use conditions.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

8.2.3 Environmental exposure controls: Product should not be released to the environment.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance: Dark green crystals

Odor: Odorless

Odor threshold: No data available

pH: No data available

Melting point/Freezing point: 100-110 °C (212-230 °F)

Boiling point/Boiling point range: No data available

Flash Point: No data available

Evaporation rate: Not applicable

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor Pressure: No data available

Vapor density: No data available

Relative density: No data available

Solubility: Slightly soluble in water

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing Properties: No data available

9.2 Other information: No further relevant information available

Section 10: Stability and Reactivity

10.1 Reactivity: No data available.

10.2 Chemical Stability: Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions: No data available.

10.4 Conditions to avoid: Avoid dust formation. Avoid incompatible products. Avoid excess heat.

10.5 Incompatible materials: Strong oxidizing agents.

10.6 Hazardous decomposition products: Hydrogen chloride gas, Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂).

10.7 Hazardous polymerization: Hazardous polymerization will not occur.

Section 11: Toxicological Information

Information on the likely routes of exposure:

11.1 Information on toxicological effects:

A. Acute toxicity:

Methylene blue LD50 Oral, Rat 1180 mg/kg

B. Skin corrosion/irritation: Irritating to skin and respiratory system.

C. Serious eye damage/irritation: Irritating to eyes.

D. Respiratory or skin sensitization: No data available.

E. Germ cell mutagenicity: No data available.

F. Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

G. Reproductive toxicity: No data available

H. STOT-single exposure: No data available.

I..STOT-repeated exposure: No data available.

J. Aspiration hazard: No data available.

Additional information: RTECS #: SP5740000.

Section 12: Ecological Information

12.1 Toxicity: No data available.

12.2 Persistence and degradability: No data available.

12.3 Bio-accumulative potential: No data available.

12.4 Mobility in soil: May be mobile in soil due to its slight solubility in water.

12.5 Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects: No data available.

Section 13: Disposal Considerations

13.1 Waste treatment methods:

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with and afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

Section 14: Transport Information

DOT: Not regulated.

IATA: Not regulated.

IMDG: Not regulated.

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture:

U.S. Government Regulations:

TSCA 12(b): Not listed.

SARA 302 Components: None listed.

SARA 313 Components: None listed.

SARA 311/312 Hazards: Acute Health Hazard: Chronic Health Hazard.

OSHA: Not applicable.

CERCLA: Not applicable

State of California Proposition 65: This product does not contain any Proposition 65 chemicals.

CANADA:

CAS# 7220-79-3 is not on Canada's DSL list.

CAS# 7220-79-3 is not on Canada's NDSL list.

CAS# 7220-79-3 has a WHMIS of D2B.

15.2 Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out.

Date of Preparation: 03 October 2018.

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

CMRG: Chemical Manufacturer's Recommended Guidelines

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulative and Toxicological

vPvB: very Persistent and very Bio-accumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

ATE: Acute Toxicity Estimates

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit

CEIL: Ceiling
TSCA: Toxic Substances Control Act (USA)
DSL: Domestic Substances List (Canada)
PICCS: Philippine Inventory of Chemicals and Chemical Substances
ENCS: Existing and New Chemical Substances (Japan)
AICS: Australian Inventory of Chemical Substances
IECSC: Inventory of Existing Chemical Substances in China
KECL: Korea Existing Chemicals List

Section 16: Other Information

Disclaimer of Liability:

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