FERN & LILY BOTANICA

Methylene Blue 2% - Safety Data Sheet

30 mL glycerin-based solution. Customer handling and emergency information.

1. Identification

Product: Fern & Lily Botanica Methylene Blue 2% (also described as Methylene Blue Tincture).
Recommended use: Research and technical use. Under this designation, not for human or veterinary administration, food use or injection.
Exposure advice in Australia: Poisons Information Centre 13 11 26 (24 hours). Life-threatening emergency: 000.

2. Hazard identification

Finished-mixture Australian GHS classification:
non-hazardous
Practical precautions: Avoid swallowing, eye and skin contact and breathing mist. Keep away from children. Strong staining of skin, fabrics and surfaces is possible; spills may be slippery.
Systemic exposure: Methylene blue can interact with serotonergic medicines and cause serious blood effects.

3. Composition and information on ingredients

Mixture: Methylene blue2%;
Methylene blue: CAS 61-73-4 **Glycerol:** CAS 56-81-5. **Water:** CAS 7732-18-5.

4. First aid measures

General: Avoid contaminating rescuers. Remove contaminated clothing. Keep the bottle available for medical personnel. Never give anything by mouth to an unconscious person.
Swallowed: Rinse mouth. Do not induce vomiting. Call 13 11 26 or a doctor immediately, even without symptoms. Call 000 for collapse, seizures, breathing difficulty or severe symptoms.
Eyes: Rinse gently with running water for at least 15 minutes. Remove contact lenses if easy, then continue rinsing. Seek medical advice for persistent pain, redness or visual changes.
Skin: Wash thoroughly with soap and water. Seek medical advice if irritation persists or exposure is significant. Do not use solvents or bleach to remove staining from skin.
Inhaled mist: Move to fresh air. Seek medical advice if symptoms occur; call 000 for breathing difficulty. Resuscitation should be performed only by a trained person when safe.
Symptoms and medical advice: Irritation, gastrointestinal upset and blue staining may occur. Significant exposure may produce haemolysis or methaemoglobinaemia. Consider serotonin toxicity, especially with serotonergic medicines, and haemolysis in G6PD deficiency. Contact a clinical toxicologist or Poisons Information Centre. Do not use this product as an antidote.

5. Firefighting measures

Extinguishing media: Water spray, foam, dry chemical or carbon dioxide appropriate to the surrounding fire. Avoid a forceful jet that spreads liquid.
Hazards: Finished-mixture flash point and flammability are not verified. A glycerin base must not be assumed non-combustible. Heating can rupture containers; decomposition may release carbon oxides and nitrogen-, sulphur- and chlorine-containing fumes.
Firefighters: Wear protective clothing and self-contained breathing apparatus. Cool containers from a safe position. Contain contaminated firewater.

6. Accidental release measures

Keep people away from the spill. Ventilate. Wear splash goggles, suitable gloves and protective clothing. Avoid mist and contact; take care with slippery liquid and broken glass.
Prevent entry into drains, soil and waterways. Absorb with inert non-combustible material and collect in a compatible labelled waste container. Use tools for broken glass. Contain detergent washings. Obtain trained assistance for large or uncontrolled releases.

7. Handling and storage

Handle small quantities carefully in a ventilated area. Avoid splashes, mist and ingestion. Do not eat, drink or smoke while handling. Wash hands afterwards. Never transfer to food or drink containers.
Store upright, tightly closed, in the original labelled container, protected from light, excessive heat and incompatible chemicals. Keep securely away from children, food and animal feed.

8. Exposure controls and personal protection

Exposure limits: no numerical limit is assigned here. Missing information does not mean no limit applies. Biological monitoring limits for this mixture are not established in the supplied information.

Controls: Avoid generating aerosols or heating. Provide adequate ventilation and running water. Use local exhaust where airborne exposure is possible.
Protection: Wear chemical splash goggles and suitable chemical-resistant gloves for spill cleanup or splash-prone handling. Confirm glove compatibility and breakthrough time with the glove supplier. Protective clothing is appropriate where splashing is likely. Assess respiratory protection if ventilation cannot control airborne contaminants; unknown emergency atmospheres require trained responders.

9. Physical and chemical properties

Physical state / colour: Reported liquid solution; expected deep blue appearance. **Odour and threshold:** Not determined.
Not determined for the finished mixture: pH; melting/freezing point; boiling point/range; flammability; explosive limits;
flash point; auto-ignition and decomposition temperatures; viscosity; solubility; partition coefficient; vapour pressure;
density/relative density; relative vapour density; evaporation rate; oxidising and explosive properties.
Particle characteristics: Not applicable if a homogeneous liquid; supplier to confirm absence of suspended material.
Ingredient properties have not been substituted for mixture test results.

10. Stability and reactivity

Reactivity / hazardous reactions: Expected to remain stable under suitable closed, light-protected storage.
Avoid: Excessive heat, direct light, contamination and drying on hot surfaces. Keep away from strong oxidising and reducing agents; confirm other incompatibilities from ingredient SDSs.
Decomposition: No decomposition expected during appropriate storage, subject to verification. Fire decomposition products are described in Section 5.

11. Toxicological information

Exposure routes: Ingestion, eye/skin contact and inhalation of generated mist.
Classification endpoints: Acute toxicity; skin/eye irritation or corrosion; sensitisation; mutagenicity; carcinogenicity; reproductive toxicity; target-organ effects after single/repeated exposure; and aspiration hazard require mixture assessment.
Consumer warning: TGA advises against oral methylene blue use unless advised or prescribed by a healthcare professional. It warns of potentially life-threatening serotonin syndrome with medicines affecting serotonin, pregnancy-related harm and haemolysis in people with G6PD deficiency. Symptoms of serotonin toxicity may include agitation, confusion, sweating, tremor and muscle spasms. These warnings do not establish a safe dose or quantify risk for this formulation.

12. Ecological information

Intense colour can visibly contaminate water. Prevent environmental release.

13. Disposal considerations

Keep unwanted liquid, absorbents and contaminated washings in compatible labelled containers. Contact the local council or an authorised chemical waste service for disposal instructions. Do not pour into drains or put free liquid in general waste. Containers may retain residue; handle accordingly. Dispose of contaminated broken glass safely.

14. Transport information

ADG road/rail, IMDG sea and ICAO/IATA air:
No non-dangerous-goods declaration is made.
Protect bottles against breakage and leakage; keep upright in secondary containment and away from incompatible cargo.

15. Regulatory information

This SDS is not evidence of TGA registration, approval or permission for oral or therapeutic use.

Abbreviations: SDS: Safety Data Sheet; GHS: Globally Harmonized System; CAS: Chemical Abstracts Service; G6PD:
glucose-6-phosphate dehydrogenase; ADG: Australian Dangerous Goods; IMDG: International Maritime Dangerous
Goods; ICAO/IATA: international air transport organisations.