

SAFETY DATA SHEET

According to Regulation (EC) No. 2020/878

Version 2; Revision date 03.07.2025;

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Product name: **METHYLENE BLUE SOLUTION 2%**

CAS-No.: 7220-79-3

REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2. Intended use substance or mixture

Laboratory chemicals, manufacture of substances.

1.3. Details of the supplier of the safety data sheet

Company:

Curaltus Ltd

Piliakalnio 7, LT-06229 Vilnius, Lithuania

info@curaltus.com

1.4. Emergency telephone

For information in Europe, call: + 32 14 57 52 11

Emergency Number, Europe: + 32 14 57 52 99

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Not a hazardous substance or mixture

2.2. Label elements

No hazard pictogram

2.3. Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name: Methylene blue solution 2%

Synonyms: Methylthioninium chloride solution 2%

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

Molecular weight: 373.90 g/mol

Content: 2g Methylene blue 98g water

CAS-No. : 7220-79-3

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

If inhaled Move person into fresh air. If breathing is difficult, give oxygen. Consult a physician. Get medical attention immediately if symptoms occur.

In case of skin contact Wash off with soap and plenty of water. Consult a physician. Get medical attention immediately if symptoms occur.

In case of eye contact	Flush eyes with plenty of water as a precaution. Remove contact lenses. Consult a physician. Get medical attention if irritation develops and persists.
If swallowed	Rinse mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Consult a physician. Get medical attention if symptoms occur.

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

The most important known symptoms and effects are described in the labelling (see 2.2 and/or in 11).

5. FIREFIGHTING MEASURES

5.1. Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide depending on the local circumstances.

5.2. Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides, sulfur oxides, hydrogen chloride gas.

5.3. Advice for firefighters

Wear self-contained breathing apparatus in pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear for firefighting if necessary. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

5.4. Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Collect, bind with liquid absorbent materials. Ensure adequate ventilation. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For disposal see 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Normal measures for preventive fire protection. Avoid ingestion, inhalation. For precautions see 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Store in dry cool place (in the refrigerator is recommended).

7.3. Specific end use(s)

Apart from the uses mentioned in 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Engineering Controls:

Facilities storing and utilizing this material should be equipped with an eye wash.

8.2. Personal Protective Equipment

Eyes: Wear chemical safety goggles approved NIOSH (US) or EN 166(EU).

Skin:	Wear appropriate protective gloves.
Clothing:	Wear appropriate protective clothing.
Respirators:	Wear respirators approved NIOSH (US) or EN (EU) when vapors are generated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid	Boiling point:	Not available
Color:	Dark green to blue	Freezing/Melting point:	Not available
Odor:	Odorless	Decomposition temperature:	Not available
Vapor pressure:	Not available	Solubility in water:	Very soluble
Vapor density:	Not available	Relative density:	Not available
Evaporation rate:	Not available	Molecular formula:	C ₁₆ H ₁₈ ClN ₃ S·3H ₂ O
Viscosity:	Not available	Molecular weight:	373.90 g/mol

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions
Possibility of hazardous reactions:	No data available
Conditions to avoid:	No data available
Incompatible materials:	No data available
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides, hydrogen chloride gas.
Other decomposition products	No data available

In the event of fire: see 5

11. TOXICOLOGICAL INFORMATION

Unless otherwise specified data extracted from RTECS – Register of Toxic Effects of Chemical Substances.

11.1. Toxicity

Oral (rat) acute LD50:	1.180 mg/kg (Methylene blue)
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens

11.2. Additional information

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Vomiting, Diarrhea, Nausea, Dizziness, Headache (Methylene blue)
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Methylene blue)

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available

13. DISPOSAL CONSIDERATIONS

13.1. Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

13.2. Contaminated packaging

Dispose of as unused product.

▪ **14. TRANSPORT INFORMATION**

Not regulated for transport.

▪ **15. REGULATORY INFORMATION**

This safety datasheet complies with the requirements of:
Regulation (EC) No. 2020/878.

▪ **16. OTHER INFORMATION**

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.