

MATERIAL SAFETY DATA SHEET

According to EC Regulation No. 1907/2006



Version: 4
Date of Issue: 13.12.16
Revision Date:

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

1.1 Identification of the product

Substance Name: **Monocarboxymethylene Blue-SE**
Catalogue No.: AF-0202
EC No.: Not known.
CAS No.: Not known.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use: Laboratory chemical, Redox label
Uses advised against: Not known.

1.3 Detail of the supplier of the safety data sheet

Company: emp Biotech GmbH
Robert-Roessle-Str. 10
D-13125 Berlin

Telefon: +49-30-9489-2201 (Monday-Friday, 9:00 am-5:00 pm)
Telefax: +49-30-9489-3201
E-Mail: info@empbiotech.com

1.4 Emergency Number

INFOTRAC: +1-352-323-3500 (Phone) or in the **US 800-535-5053** (toll-free), 24 hours/day, 7 days/week

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Hazard classes and Hazard categories	Hazard Statements
Acute Tox. 4	H302
Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 3	H335

2.2 Label elements

Label elements according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Pictograms



GHS07

Signal Word Warning

Hazard Statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

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Precautionary statements

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU)

None

Additional labelling

None

2.3 Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance name: 3-[N-(3-carboxyethyl)-N-methylamino]-7-[N,N-dimethylamino]-phenothiazin-5-iumperchlorate succinimidyl ester
Synonyms: Monocarboxymethylene Blue-NHS ester; MCMB NHS ester; methylene blue NHS ester
Index No.: None
EC No.: None
CAS No.: Not known.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance.

After inhalation:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

After skin contact:

Wash off with soap and plenty of water. Get medical attention.

After eye contact:

Rinse out with plenty of water with the eyelid held wide open. Call an ophthalmologist.

After swallowing:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use fire extinguishing methods suitable to surrounding conditions. Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

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Carbon oxides, nitrogen oxides (NOx), Sulphur oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Additional information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Take up with appropriate tools to put the spilled solid in a convenient waste disposal container. Avoid formation of dust. Clean up affected area. Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry place.
Recommended storage temperature: -20 °C

7.3 Specific end uses

A part from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

No occupational exposure limits established.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protection equipment

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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- Eye protection:* Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Hand protection:* Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
- Skin and body protection:* The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Apply skin-protective barrier cream.
- Hygiene measures:* When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Do not swallow. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important health, safety and environmental information

- a) Physical state: solid / dark blue
b) Odour: no data available
c) Odour Threshold: no data available
d) pH value: not applicable
e) Melting point: no data available
f) Boiling point: no data available
g) Flash point: no data available
h) Evaporation rate: no data available
i) Flammability (solid, gas): no data available
j) Explosion limits: lowest no data available
highest no data available
k) Vapour pressure (20 °C): no data available
l) Vapour density: no data available
m) Relative density (20°C): no data available
n) Solubility in water: almost insoluble in water; soluble in dimethylformamide and methanol
o) Partition coefficient: no data available
n-octanol/water
p) Autoignition temperature: no data available
q) Decomposition temperature: no data available
r) Viscosity: no data available
s) Explosive properties: no data available
t) Oxidizing properties: no data available

9.2 Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Slow decomposition (hydrolysis) in atmosphere with high humidity and in presence of water.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

High humidity and presence of water.

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10.5 Incompatible materials

Water, Alcohols, Strong bases, Amines, acids, Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available.
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure

No data available.

Other information

RTECS: Not available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

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12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

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

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities. Observe all Federal, State, and Local Regulations.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

15.2 Chemical Safety Assessment

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no data available

16. OTHER INFORMATION

Abbreviations and acronyms

Acute Tox. 4	Acute Toxicity, Oral, Category 4
Skin Irrit. 2	Skin Irritation, Category 2
Eye Irrit. 2	Eye Irritation, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Respiratory tract, Category 3

Text of H-code(s) and R-phrase(s) mentioned in Section 2

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Additional information

This information is given without any warranty or representation. It is believed to be correct but does not claim to be all inclusive and shall be used only as a guide. emp Biotech GmbH shall not be held liable for any damage resulting from handling or contact with the above product. It is offered solely for your consideration, investigation and verification.