

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

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

1.1 Product identifier

- Trade name: Malachite green oxalate
- Synonyma C.I. 42000; C.I. Basic Green 4



Article number: 28335

CAS Number:

2437-29-8

EC number:

219-441-7

Index number:

602-096-00-5

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

No further relevant information available.

Application of the substance / the mixture Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

Information department: Product Safety department Tel.: +49 6221 13840-35

1.4 Emergency telephone number:

Medical Emergency Information in case of poisoning:

Poison Information Center Mainz - Phone: +49 (0) 6131 19240

(advisory service in German or English language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08

Repr. 2

H361d Suspected of damaging the unborn child.



GHS05

Eye Dam. 1

H318 Causes serious eye damage.



GHS09

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4

H302 Harmful if swallowed.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: Malachite green oxalate

(Contd. of page 1)

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms GHS05, GHS07, GHS08, GHS09

· Signal word Danger

· Hazard statements

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H361d Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P201 Obtain special instructions before use.

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances

· CAS No. Description:

2437-29-8 Malachite green oxalate

· Identification number(s):

· **EC number:** 219-441-7

· **Index number:** 602-096-00-5

· Description:

· **Empirical formula:** $C_{52}H_{54}N_4O_{12}$

· **MW:** 927.00

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation** Supply fresh air; consult doctor in case of complaints.

· **After skin contact** Immediately rinse with water.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

· **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.

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

Coughing

Breathing difficulty

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

No further relevant information available.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: *Malachite green oxalate*

(Contd. of page 2)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be formed, but not limited to:
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **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 disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- **Breathing equipment:**
Short term filter device:
Filter P3.
- **Protection of hands:**
Protective gloves.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: Malachite green oxalate

(Contd. of page 3)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Neoprene gloves

Nitrile rubber, NBR

- **Eye protection:** Safety glasses

- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

| | |
|----------------|----------------------|
| Form: | Powder |
| Colour: | Dark green |
| Odour: | Weak, characteristic |

- **Change in condition**

Melting point/freezing point: ca. 159 °C

Initial boiling point and boiling range: undetermined

- **Flash point:** Not applicable

- **Flammability (solid, gaseous)** Product is not flammable.

- **Explosive properties:** Product does not present an explosion hazard.

- **Density:** Not determined

- **Bulk density at 20 °C:** 400 - 500 kg/m³

- **Solubility in / Miscibility with**

Water at 20 °C: 100 g/l

- **Alcohols at 20 °C:** 60 g/l (Ethanol)

- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

- **10.2 Chemical stability**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

- **10.3 Possibility of hazardous reactions** Reactions with strong oxidizing agents

- **10.4 Conditions to avoid** No further relevant information available.

- **10.5 Incompatible materials:** No further relevant information available.

- **10.6 Hazardous decomposition products:**

Nitrogen oxides

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: Malachite green oxalate

Carbon monoxide and carbon dioxide

(Contd. of page 4)

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful if swallowed.

· LD/LC50 values that are relevant for classification:

| | | |
|------|------|-----------------|
| Oral | LD50 | 275 mg/kg (rat) |
|------|------|-----------------|

· Primary irritant effect:

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· Serious eye damage/irritation

Causes serious eye damage.

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- **Additional toxicological information:** After inhalation irritations of the mucous membrane are possible.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

- **Carcinogenicity** Based on available data, the classification criteria are not met.

· Reproductive toxicity

Suspected of damaging the unborn child.

- **STOT-single exposure** Based on available data, the classification criteria are not met.

- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

| | |
|----------|---------------------------|
| EC50/48h | 0.29 mg/l (Daphnia magna) |
|----------|---------------------------|

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

· Ecotoxicological effects:

- **Remark:** Very toxic for fish

· Additional ecological information:

· General notes:

Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water.

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· 12.5 Results of PBT and vPvB assessment

- **PBT:** PBT - assessment not available.

- **vPvB:** vPvB - assessment not available.

- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: Malachite green oxalate

(Contd. of page 5)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

| | |
|---|--|
| · 14.1 UN-Number | UN2811 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | 2811 TOXIC SOLID, ORGANIC, N.O.S. (Malachite green oxalate) |
| · ADR | 2811 TOXIC SOLID, ORGANIC, N.O.S. (Malachite green oxalate) |
| · IMDG | TOXIC SOLID, ORGANIC, N.O.S. (Malachite green oxalate) |
| · IATA | Toxic solid, organic, n.o.s. (Malachite green oxalate) |
| · 14.3 Transport hazard class(es) | |
| · ADR, IMDG | |
|  | |
| · Class | 6.1 Toxic substances. |
| · Label | 6.1 |
| · IATA | |
|  | |
| · Class | 6.1 Toxic substances. |
| · Label | 6.1 |
| · 14.4 Packing group | III |
| · ADR, IMDG, IATA | |
| · 14.5 Environmental hazards: | Environmentally hazardous substance, solid; Marine Pollutant |
| · Marine pollutant: | Yes (P) |
| · Special marking (ADR): | Symbol (fish and tree) |
| · 14.6 Special precautions for user | Warning: Toxic substances. |
| · Danger code (Kemler): | 60 |
| · EMS Number: | F-A,S-A |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| · Limited quantities (LQ) | 5 kg |
| · Transport category | 2 |
| · Tunnel restriction code | E |
| · UN "Model Regulation": | UN2811, TOXIC SOLID, ORGANIC, N.O.S., 6.1, III |

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.05.2018

Version number 4

Revision: 03.05.2018

Trade name: Malachite green oxalate

(Contd. of page 6)

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed.
- **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organisation
 PBT: persistent, bioaccumulative, toxic substance (REACH)
 vPvB: very persistent, very bioaccumulative substance (REACH)
 REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
 CLP: Regulation on classification, labelling and packaging of substances and mixtures
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 P: Marine Pollutant
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 4: Acute toxicity – Category 4
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Repr. 2: Reproductive toxicity – Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- *** Data compared to the previous version altered.**

GB