

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Date of issue: 20.10.2014

Version 1.0

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No.	MX0095
Product name	Malachite Green Oxalate C.I. 42000
REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No.	18015-76-4

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

Identified uses	Reagent for development and research For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merck-chemicals.com">www.merck-chemicals.com</a> ).
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**1.3 Details of the supplier of the safety data sheet**

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

**1.4 Emergency telephone number**      **Please contact the regional company representation in your country.**

**SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity, Category 4, Oral, H302  
Serious eye damage, Category 1, H318  
Reproductive toxicity, Category 2, H361d  
Acute aquatic toxicity, Category 1, H400  
Chronic aquatic toxicity, Category 1, H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification (67/548/EEC or 1999/45/EC)**

Repr.Cat.3	Toxic to Reproduction Category 3	R63
Xn	Harmful	R22
Xi	Irritant	R41
N	Dangerous for the environment	R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

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## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

#### Hazard pictograms



#### 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

##### Prevention

P273 Avoid release to the environment.

##### Response

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

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P313 Get medical advice/ attention.

#### Reduced labelling (≤125 ml)

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H318 Causes serious eye damage.  
H361d Suspected of damaging the unborn child.

#### Precautionary statements

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

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P313 Get medical advice/ attention.

Index-No. 602-096-00-5

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Index-No. 602-096-00-5

EC-No. 241-922-5

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**Hazardous components (REGULATION (EC) No 1272/2008)**

*Chemical Name (Concentration)*

CAS-No.	Registration number	Classification
18015-76-4	*)	

Methanaminium, N-[4-[[4-(dimethylamino)phenyl]phenylmethylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, ethanedioate - (<= 100 %)

Acute toxicity, Category 4, H302  
Serious eye damage, Category 1, H318  
Reproductive toxicity, Category 2, H361d  
Acute aquatic toxicity, Category 1, H400  
Chronic aquatic toxicity, Category 1, H410

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Hazardous components (1999/45/EC)**

*Chemical Name (Concentration)*

CAS-No.	Classification
18015-76-4	Repr.Cat.3; R63 Xn, Harmful; R22 Xi, Irritant; R41 N, Dangerous for the environment; R50/53

Methanaminium, N-[4-[[4-(dimethylamino)phenyl]phenylmethylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, ethanedioate - (<= 100 %)

For the full text of the R-phrases mentioned in this Section, see Section 16.

**3.2 Mixture**

Not applicable

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**SECTION 4. First aid measures**

**4.1 Description of first aid measures**

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

Irritation and corrosion  
Risk of serious damage to eyes.

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

No information available.

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**SECTION 5. Firefighting measures**

**5.1 Extinguishing media**

*Suitable extinguishing media*

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Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:

nitrogen oxides

**5.3 Advice for firefighters**

*Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

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

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**SECTION 6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

**6.4 Reference to other sections**

Indications about waste treatment see section 13.

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**SECTION 7. Handling and storage**

**7.1 Precautions for safe handling**

*Advice on safe handling*

Observe label precautions.

*Hygiene measures*

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

**7.2 Conditions for safe storage, including any incompatibilities**

*Storage conditions*

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

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### 7.3 Specific end use(s)

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

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

##### *Eye/face protection*

Tightly fitting safety goggles

##### *Hand protection*

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (splash contact), KCL 741 Dermatril® L (full contact).

This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

##### *Other protective equipment*

protective clothing

##### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Environmental exposure controls

Do not let product enter drains.

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**SECTION 9. Physical and chemical properties**

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

Form	crystals
Colour	green
Odour	No strong odour known.
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	No information available.
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

**9.2 Other data**

none

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**SECTION 10. Stability and reactivity**

**10.1 Reactivity**

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

**10.2 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**10.3 Possibility of hazardous reactions**

Dangerous reactions are not expected handling the product according to its intended use.

**10.4 Conditions to avoid**

no information available

**10.5 Incompatible materials**

no information available

**10.6 Hazardous decomposition products**

in the event of fire: See section 5.

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**SECTION 11. Toxicological information**

**11.1 Information on toxicological effects**

*Acute oral toxicity*

LD50 Rat: 275 mg/kg

Symptoms: Irritation of mucous membranes

*Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

*Acute dermal toxicity*

This information is not available.

*Skin irritation*

This information is not available.

*Eye irritation*

Rabbit

Result: Severe irritations

(External MSDS)

Causes serious eye damage.

*Sensitisation*

This information is not available.

*Germ cell mutagenicity*

*Genotoxicity in vitro*

Ames test

Salmonella typhimurium

Result: negative

(National Toxicology Program)

*Carcinogenicity*

This information is not available.

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*Reproductive toxicity*

This information is not available.

*Teratogenicity*

This information is not available.

*CMR effects*

Teratogenicity:

Suspected of damaging the unborn child.

*Specific target organ toxicity - single exposure*

This information is not available.

*Specific target organ toxicity - repeated exposure*

This information is not available.

*Aspiration hazard*

This information is not available.

**11.2 Further information**

After absorption:

Damage to:

Kidney, Liver, Cardiac

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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**SECTION 12. Ecological information**

**12.1 Toxicity**

*Toxicity to fish*

LC50 Ictalurus catus (catfish): 0,14 mg/l; 96 h (ECOTOX Database)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 0,29 mg/l; 48 h (ECOTOX Database)

*Toxicity to bacteria*

EC50 Sewage sludge: 10 - 100 mg/l

OECD Test Guideline 209

**12.2 Persistence and degradability**

No information available.

**12.3 Bioaccumulative potential**

No information available.

**12.4 Mobility in soil**

No information 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**

Discharge into the environment must be avoided.

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**SECTION 13. Disposal considerations**

*Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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**SECTION 14. Transport information**

**Land transport (ADR/RID)**

14.1 UN number UN 2811  
14.2 Proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (MALACHITE GREEN OXALATE)  
14.3 Class 6.1  
14.4 Packing group III  
14.5 Environmentally hazardous yes  
14.6 Special precautions for user yes  
Tunnel restriction code E

**Inland waterway transport (ADN)**

Not relevant

**Air transport (IATA)**

14.1 UN number UN 2811  
14.2 Proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (MALACHITE GREEN OXALATE)  
14.3 Class 6.1  
14.4 Packing group III  
14.5 Environmentally hazardous yes  
14.6 Special precautions for user no

**Sea transport (IMDG)**

14.1 UN number UN 2811  
14.2 Proper shipping name TOXIC SOLID, ORGANIC, N.O.S. (MALACHITE GREEN OXALATE)  
14.3 Class 6.1  
14.4 Packing group III  
14.5 Environmentally hazardous yes  
14.6 Special precautions for user yes  
EmS F-A S-A

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not relevant

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**SECTION 15. Regulatory information**

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

*EU regulations*

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Major Accident Hazard Legislation 96/82/EC  
Dangerous for the environment  
9a  
Quantity 1: 100 t  
Quantity 2: 200 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

*National legislation*  
Storage class 6.1C

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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### SECTION 16. Other information

#### Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H361d Suspected of damaging the unborn child.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

#### Full text of R-phrases referred to under sections 2 and 3

R22 Harmful if swallowed.  
R41 Risk of serious damage to eyes.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R63 Possible risk of harm to the unborn child.

#### Training advice

Provide adequate information, instruction and training for operators.

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**Labelling**

*Hazard pictograms*



*Signal word*  
Danger



*Hazard statements*

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H361 Suspected of damaging fertility or the unborn child.  
H410 Very toxic to aquatic life with long lasting effects.

*Precautionary statements*



Prevention  
P273 Avoid release to the environment.  
P280 Wear eye protection.  
Response  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

**Labelling (67/548/EEC or 1999/45/EC)**

<i>Symbol(s)</i>	 Xn  N	Harmful Dangerous for the environment
<i>R-phrases(s)</i>	22-41-63-50/53	Harmful if swallowed. Risk of serious damage to eyes. Possible risk of harm to the unborn child. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<i>S-phrases(s)</i>	26-36/37-39-46-60-61	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves. Wear eye/face protection. If swallowed, seek medical advice immediately and show this container or label. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/ Safety data sheets.

EC-No. 241-922-5 EC Label

**Reduced labelling (≤125 ml)**

<i>Symbol(s)</i>	 Xn  N	Harmful Dangerous for the environment
<i>R-phrases(s)</i>	22-41-63	Harmful if swallowed. Risk of serious damage to eyes. Possible risk of harm to the unborn child.
<i>S-phrases(s)</i>	26-36/37-39	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves. Wear eye/face protection.

**Key or legend to abbreviations and acronyms used in the safety data sheet**  
Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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**Regional representation**

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*