

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product name: Malachite Green
 Product Number: 20100
 Product use: For laboratory research purposes
 Restrictions on use: Not for drug or household use
 Safety Sheet Supplier: Oakley, Inc.
 4000 Luxottica Place
 Mason, OH 45040
 USA
 Telephone: (614) 492-5610
 Emergency Phone: (614) 674-4846
 E-mail address: info.exciton@luxotticaretail.com

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301
 Serious eye damage (Category 1), H318
 Reproductive toxicity (Category 2), H361
 Acute aquatic toxicity (Category 1), H400

GHS Label elements

Pictogram



Signal word: Danger

Hazard statement(s)

H301: Toxic if swallowed
 H318: Causes serious eye injury
 H361: Suspected of damaging fertility or the unborn child
 H400: Very toxic to aquatic life

Precautionary statement(s)

P201: Obtain special instructions before use
 P202: Do not handle until all safety precautions have been read and understood
 P264: Wash exposed skin thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product
 P273: Avoid release to the environment
 P280: Wear protective gloves/ protective clothing/ eye protection/ face protection
 P281: Use personal protective equipment as required
 P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 P301 + P330: IF SWALLOWED: Rinse mouth
 P301 + P312: IF SWALLOWED: Call a POISON CENTER or 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.

P308 + P313 IF exposed or concerned: Get medical advice/attention
 P391P405 Store locked up
 P501 Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified or not covered by GHS

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: [4-[[4-(dimethylamino)phenyl]-phenylmethylidene]cyclohexa-2,5-dien-1-ylidene]-dimethylazanium;2-hydroxy-2-oxoacetate;oxalic acid
 Formula: C₂₃H₂₅N₂·½C₂H₂O₄·C₂H₂O₄
 Molecular Weight: 463.50 gm/mol
 CAS-No.: 2437-29-8
 EC-No.: 219-441-7

Hazardous components

Component	Classification	Concentration
[4-[[4-(dimethylamino)phenyl]-phenylmethylidene]cyclohexa-2,5-dien-1-ylidene]-dimethylazanium;2-hydroxy-2-oxoacetate;oxalic acid	Acute toxicity, Oral (Category 3), H301 Serious eye damage (Category 1), H318 Reproductive toxicity (Category 2), H361 Acute aquatic toxicity (Category 1), H400	<= 100%

4. FIRST AID MEASURES**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Take immediately to a hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

No further relevant information available – See Section 2.

Indication of any immediate medical attention and special treatment needed

No further relevant information available

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Prevent further leakage of spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

No reported exposure limit values.

Appropriate engineering controls

Use only in an area equipped with explosion proof exhaust ventilation.

Hygiene measures and engineering controls

Adequate ventilation and/or containment in accordance with good laboratory practices.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with impermeable 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.

Eye / face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Body protection

Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance	Form: solid
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	No data available
n) Solubility	Soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available

10. STABILITY AND REACTIVITY

a) Reactivity	No data available
b) Chemical stability	Stable under recommended storage conditions
c) Possibility of hazardous reactions	No data available
d) Conditions to avoid (e.g. static discharge)	Heat, flames, and sparks. Extremes of temperature and Direct sunlight
e) Incompatible materials	Strong oxidizing agents
f) Hazardous decomposition products	See Section 5.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral – rat – 275 mg/kg

Inhalation LC50

No data available

Dermal LD50

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Rabbit – Severe eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Routes of Exposure:

Inhalation, Eye contact, Ingestion, Skin contact.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish

LC50 – *Ictalurus punctatus* – 0.14 mg/L – 96.0 h

Toxicity to daphnia and other aquatic invertebrates

EC50 – *Daphnia magna* (water flea) – 0.29 mg/L – 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 2811 Class 6.1 Packing Group III
Proper shipping name: Toxic solids, organic, n.o.s. (Bis[[4-[4-(dimethylamino_benzydrylidene)cyclohexa-2,5-dien-1-ylidene]dimethylammonium] oxalate)
Marine pollutant: No Poison inhalation hazard: No

IMDG

UN number: 2811 Class 6.1 Packing Group III EMS-No: F-A, S-A
Proper shipping name: Toxic solids, organic, n.o.s. (Bis[[4-[4-(dimethylamino_benzydrylidene)cyclohexa-2,5-dien-1-ylidene]dimethylammonium] oxalate)
Marine pollutant: No

IATA

UN number: 2811 Class 6.1 Packing Group III
Proper shipping name: Toxic solids, organic, n.o.s. (Bis[[4-[4-(dimethylamino_benzydrylidene)cyclohexa-2,5-dien-1-ylidene]dimethylammonium] oxalate)

15. REGULATORY INFORMATION**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (de Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to Massachusetts Right to Know Act

Pennsylvania Right To Know Components

(Bis[[4-[4-(dimethylamino_benzydrylidene)cyclohexa-2,5-dien-1-ylidene]dimethylammonium] oxalate)
CAS-No.: 2437-29-8

New Jersey Right To Know Components

(Bis[[4-[4-(dimethylamino_benzydrylidene)cyclohexa-2,5-dien-1-ylidene]dimethylammonium] oxalate)
CAS-No.: 2437-29-8

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION**Further information**

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