

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

Malachite Green




ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier	
Product Name	Malachite Green
Product code	EA0024 & EA0025
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified Use(s)	Medication for Koi carp
Uses Advised Against	Only to be used with Koi
1.3 Details of the supplier of the safety data sheet	
Company Identification	Evolution Aqua Ltd. Kellet Close, Wigan, Lancashire United Kingdom
Telephone	01942 216 554
Fax	Not available.
E-Mail (competent person)	info@evolutionaqua.com
1.4 Emergency telephone number	+44 (0) 1942 216554 (Monday - Friday, GMT 08:30 - 17:00)
Languages spoken	English

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
2.1.1 Regulation (EC) No. 1272/2008 (CLP)	Eye Irrit. 2; H319 Aquatic Chronic 3; H412
2.2 Label elements	
Product Name	According to Regulation (EC) No. 1272/2008 (CLP) Malachite Green
Contains:	Not applicable
Hazard Pictogram(s)	
Signal Word(s)	WARNING
Hazard Statement(s)	H319: Causes serious eye irritation. H412: Harmful to aquatic life with long lasting effects.
Precautionary Statement(s)	P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P264: Wash hands and exposed skin thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.
2.3 Other hazards	None known.

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

Malachite Green



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures Substances in preparations / mixtures
EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Malachite Green	1-3	2437-29-8	219-441-7	Not yet assigned in the supply chain	Acute Tox. 4; H302 Eye Dam. 1; H318 Repr. 2; H361d Aquatic Acute 1; H400 Aquatic Chronic 1; H410

For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Inhalation

Skin Contact

Eye Contact

Ingestion

Wear suitable protective clothing and gloves. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. Eyewash facilities should be stationed close to workplace where possible.

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, get medical advice/attention.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

Causes serious eye irritation.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media

Unsuitable extinguishing Media

5.2 Special hazards arising from the substance or mixture

5.3 Advice for fire-fighters

Not flammable. As appropriate for surrounding fire. In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide.

Direct water jet may spread the fire.

Combustion may cause toxic fumes. (Nitric oxide, Carbon monoxide, Carbon dioxide).

Fight fire with normal precautions from a reasonable distance. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

Malachite Green



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Avoid breathing vapours. Take off contaminated clothing and wash it before reuse. Avoid contact with skin, eyes or clothing. Wear suitable protective clothing. Spillage can create tripping or slipping hazards for personnel, or skidding hazards for vehicles.
6.2	Environmental precautions	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.
6.3	Methods and material for containment and cleaning up	Wash away spilled liquid (remainder) with plenty of water. Wipe up remainder then remove to safe place. Wash spill site with water and detergent. Washings must be prevented from entering surface water drains.
6.4	Reference to other sections	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1	Precautions for safe handling	Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. Wash hands and exposed skin thoroughly after handling. Good hygiene practices and housekeeping measures. Do not eat, drink or smoke during work.
7.2	Conditions for safe storage, including any incompatibilities	Keep container tightly closed and in a well-ventilated place. Keep away from food, drink and animal feeding stuffs. Keep out of reach of children.
	Storage temperature	Store at room temperature.
	Incompatible materials	Strong oxidising agents, Ammonium nitrate
7.3	Specific end use(s)	See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control parameters	
8.1.1	Occupational Exposure Limits	Not established.
8.1.2	Biological limit value	Not established.
8.1.3	PNECs and DNELs	Not established.
8.2	Exposure controls	
8.2.1	Appropriate engineering controls	Ensure adequate ventilation. Good hygiene practices and housekeeping measures. A washing facility/water for eye and skin cleaning purposes should be present. Do not eat, drink or smoke at the work place.
8.2.2	Individual protection measures, such as personal protective equipment (PPE)	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Wash hands and exposed skin thoroughly after handling.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/face protection



Eye Protection: Wear eye protection with side protection (EN166).

Skin protection



Hand protection: Not normally required.

Recommended: Wear impervious gloves (EN374).

Body protection: Wear work clothes with long sleeves.

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

Malachite Green



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

Respiratory protection



In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protective equipment should conform to the appropriate EN standard.

Thermal hazards

Not applicable

8.2.3 Environmental Exposure Controls

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Dark Blue solution
Odour	Not determined
Odour Threshold	Not determined
pH	2-3 Measured neat
Melting Point/Freezing Point	Not determined
Initial boiling point and boiling range	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not determined
Vapour pressure	Not determined
Vapour density (Air = 1)	Not determined
Relative density	Not determined
Solubility(ies)	Not determined
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined
Explosive properties	Not explosive
Oxidising properties	Not oxidising

9.2 Other information

Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1	Reactivity	Stable under normal conditions.
10.2	Chemical stability	Stable under normal conditions.
10.3	Possibility of hazardous reactions	None known.
10.4	Conditions to avoid	Avoid generation of mist. Keep out of reach of children.
10.5	Incompatible materials	Strong oxidising agents, Ammonium nitrate
10.6	Hazardous decomposition product(s)	Combustion products: Carbon monoxide, Carbon dioxide, Nitric oxide

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Substances in preparations / mixtures)

Acute toxicity - Ingestion	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation LD50 > 2000 mg/kg bw/day
Acute toxicity - Inhalation	Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation LC50 > 5 mg/kg bw/day (Dust)
Acute toxicity - Skin Contact	Mixture: Based upon the available data, the classification criteria are not met.

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

Malachite Green



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

Skin corrosion/irritation
Serious eye damage/irritation
Malachite Green

Respiratory or skin sensitization
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Aspiration hazard

Acute Toxicity Estimate Mixture Calculation LD50 > 2000 mg/kg bw/day
Mixture: Based upon the available data, the classification criteria are not met.
Mixture: Eye Irrit. 2; H319: Causes serious eye irritation.
Eye Dam. 1; H318: Causes serious eye damage.
Severe irritant to rabbit eyes. (Steen Cleinmensen, Jørn C., et al., 1984)
Mixture: Based upon the available data, the classification criteria are not met.
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11.2 Other information

None

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity Malachite Green	Mixture: Aquatic Chronic 3; H412: Harmful to aquatic life with long lasting effects. Estimated LC50 (96 hour) >10 - ≤100 mg/l (Fish) Aquatic Acute 1; H400: Very toxic to aquatic life. LC50: 0.28 mg/L (Rasbora heteromorpha) (Alabaster, JS, 1969) Aquatic Chronic 1; H410: Very toxic to aquatic life with long lasting effects. NOEC: 0.02 mg/L (Danio rerio) (Meinelt, T., et al., 1992)
12.2	Persistence and degradability Malachite Green	No data for the mixture as a whole.
12.3	Bioaccumulative potential Malachite Green	No data.
12.4	Mobility in soil Malachite Green	No data for the mixture as a whole.
12.5	Results of PBT and VPvB assessment	No data.
12.6	Other adverse effects	None of the substances in this product fulfil the criteria for being regarded as a PBT or vPvB substance.
		None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	Dispose of this material and its container as hazardous waste Avoid release to the environment. Liquid product may not be disposed of with household waste or landfilled. Do not allow to enter into drains/waters or in the soil.
13.2	Additional Information	Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

	ADR/RID	IMDG	IATA/ICAO
14.1	UN number	Not classified.	Not classified.
14.2	UN proper shipping name	Not classified.	Not classified.
14.3	Transport hazard class(es)	Not classified.	Not classified.
14.4	Packing group	Not classified.	Not classified.
14.5	Environmental hazards	Not classified.	Not classified.
14.6	Special precautions for user	See Section: 2	
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.	Not applicable.
14.8	Additional Information	None.	

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

Malachite Green



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1	EU regulations	
	Authorisations and/or Restrictions On Use	Not restricted
15.1.2	National regulations	
	Wassergefährdungsklasse (Germany)	Water hazard class: 2 (Self classification)
15.2	Chemical Safety Assessment	A chemical safety assessment is not required under REACH.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Not applicable – V1.0

References: Safety Data Sheets for ingoing ingredients. Harmonised Classification(s) for Malachite Green (CAS No. 2437-29-8)

Literature References:

- 1) Alabaster, JS, 1969, Survival of fish in 164 herbicides, insecticides, fungicides, wetting agents and miscellaneous substances, International Pest control, 11, pp. 29-35.
- 2) Meinelt, T., Stüber, A., Staaks, G.: The practicability of an embryo brood test with the zebrafish (Danio rerio HAMILTON-BUCHANAN), illustrated by the example of therapeutically used therapeutics; Fi sch.wiss 10 (1992), pp. 111-113
- 3) Steen Cleinmenssen, Jørn C., et al., 1984, Toxicological studies on malachite green: A triphenylmethane dye, Archives of Toxicology, 56, pp. 43-45.

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830.

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP).	Classification Procedure
Eye Irrit. 2; H319	Threshold Calculation
Aquatic Chronic 3; H412	Summation Calculation

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic
vPvB	vPvT: very Persistent and very Toxic
OECD	Organisation for Economic Cooperation and Development
LOAEC	Lowest observed adverse effect concentration
NOAEL	No Observed Adverse Effect Level
NOAEC	no observed adverse effect concentration

Hazard classification / Classification code:

Acute Tox. 4; Acute toxicity, Category 4
Eye Dam. 1; Serious eye damage/irritation, Category 1
Eye Irrit. 2; Eye Irritation, Category 2
Repr. 2; Reproductive toxicity, Category 2
Aquatic Acute 1; Hazardous to the aquatic environment, Acute, Category 1
Aquatic Chronic 1; Hazardous to the aquatic environment, Chronic, Category 1
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic, Category 3

Hazard Statement(s)

H332: Harmful if inhaled.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.
H361d: Suspected of damaging the unborn child.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H412: Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET

Version: 1.0 Date: 06/11/2019

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Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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