

Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



103701 Malachite Arabian, Antlerite

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Revised edition: 27.11.2018

Version: 2

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1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Malachite Arabian, Antlerite

Article No.: 103701

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

*Acute toxicity (oral), hazard category 4
Eye irritation, hazard category 2
Acute toxicity (inhalation), hazard category 4
Hazardous to the aquatic environment, chronic category 1*

H302 Harmful if swallowed.

Cat.: 4
H319 Causes serious eye irritation.

Cat.: 2
H332 Harmful if inhaled.

Cat.: 4
H410 Very toxic to aquatic life with long lasting effects.

Cat.: 1

Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Hazard designation:



GHS07-1

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GHS09

Signal word:

Warning

Hazard designation:

| | |
|------|---|
| H302 | Harmful if swallowed. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Safety designation:

| | |
|----------------|--|
| P280 | Wear protective gloves/ clothing/ eye/ face protection. |
| P301+P330+P331 | If swallowed: Rinse mouth. Do not induce vomiting. |
| P304+P340 | If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P312 | Call a poison center or physician if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/ attention. |

Hazardous components for labelling:

2.3. Other Hazards

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization: Copper sulfate, $Cu_3(SO_4)(OH)_4$

Information on Components / Hazardous Ingredients:

| | |
|---|----------------------|
| Copper compound (Xn; R22; H302-319-332-410) | CAS-Nr: 12069-69-1 |
| | EINECS-Nr: 235-113-6 |
| | EC-Nr: 029-020-00-8 |

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Remove contaminated clothes.

After inhalation:

Supply fresh air.

After skin contact:

Wash off immediately with soap and plenty of water and rinse thoroughly.

After eye contact:

Rinse open eye for several minutes under running water. Should irritation continue, seek medical advice.

After ingestion:

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Rinse mouth with plenty of water and consult physician.

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

No further information available.

Effects:

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment:

No further information available.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Product itself does not burn.

Use extinguishing media for surrounding fire.

Unsuitable extinguishing media:

None known.

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: release of hazardous decomposition products.

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Avoid formation of dust, wear protective clothing. Keep spectators away.

6.2. Environmental Precautions

Environmental precautions:

Prevent contamination of soils, drains and surface water.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Take up mechanically and collect in suitable container for disposal. Rinse spill area. Avoid dust formation.

6.4. Reference to other Sections

For information for safe handling see Section 7.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

The usual precautionary measures are to be adhered to when

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handling chemicals.

Provide adequate ventilation.

Hygienic measures:

Wash hands at the end of work. Preventive skin protection recommended.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions:

Store in tightly sealed containers in a dry and cool room.

Requirements for storage areas and containers:

Keep container tightly closed.

Information on fire and explosion protection:

Product is not flammable.

Do not store together with: acids.

Do not store together with: strong oxidants.

Do not store together with: foodstuffs and animal feed.

Storage class:

10-13

Further Information:

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

TWA-Value: 0.01 mg/m³ air-borne fraction

Peak limit category II (2)

Parameters to be controlled:

Derived No-Effect Level (DNEL):

Predicted No-Effect Concentration (PNEC):

Additional Information:

8.2. Exposure Controls

Technical protective measures:

Provide adequate ventilation.

Personal Protection

General protective measures:

Wash hands before breaks and after work.

Keep away from foodstuffs, beverages and feed.

Do not inhale vapor/dust.

Remove contaminated clothing. Wash hands after work.

Respiratory protection:

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| | |
|-----------------------------------|---|
| | <i>Dust mask.</i> <i>Dust mask recommended when very dusty (with particle filter P2/P3; EN 143).</i> |
| <i>Hand protection:</i> | <i>Protective gloves</i> |
| <i>Protective glove material:</i> | <i>Chloroprene rubber (CR), nitrile rubber (NBR), butyl rubber, fluoro carbon rubber (FKM), polyvinyl chloride (PVC).</i> |
| <i>Eye protection:</i> | <i>Safety glasses (EN 166)</i> |
| <i>Body protection:</i> | <i>Protective clothing.</i> |
| <i>Environmental precautions:</i> | <i>Prevent contamination of open water ways and sewage system. Avoid contamination of ground water.</i> |

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

| | |
|-----------------------------------|---|
| <i>Form:</i> | <i>powder</i> |
| <i>Color:</i> | <i>green</i> |
| <i>Odor:</i> | <i>odorless</i> |
| <i>Odor threshold:</i> | <i>No information available.</i> |
| <i>pH-Value:</i> | <i>9 (100 g/l; 20°C)</i> |
| <i>Melting temperature:</i> | <i>not available</i> |
| <i>Boiling temperature:</i> | <i>not applicable</i> |
| <i>Flash point:</i> | <i>not combustible</i> |
| <i>Evaporation rate:</i> | <i>No information available.</i> |
| <i>Flammability (solid, gas):</i> | <i>non-combustible</i> |
| <i>Upper explosion limit:</i> | <i>no information available</i> |
| <i>Lower explosion limit:</i> | <i>no information available</i> |
| <i>Vapor pressure:</i> | <i>ca. 1050 kg/m³ not determined</i> |
| <i>Vapor density:</i> | |

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| | |
|---|---|
| Density: | 4.0 g/cm ³ (20°C) |
| Solubility in water: | insoluble |
| Coefficient of variation (n-Octanol/Water): | no information available |
| Auto-ignition temperature: | No information available. |
| Decomposition temperature: | 200°C |
| Viscosity, dynamic: | not applicable |
| Explosive properties: | Product does not present an explosion hazard. |
| Oxidizing properties: | No information available. |
| Bulk density: | |

9.2. Further Information

| | |
|-------------------------|-------------------------|
| Solubility in solvents: | |
| Viscosity, kinematic | |
| Burning class: | |
| Solvent content: | |
| Solid content: | |
| Particle size: | |
| Other information: | No further information. |

10. Stability and Reactivity

| | |
|--|---|
| 10.1. Reactivity | No information available. |
| 10.2. Chemical Stability | Stable if used according to specifications. |
| 10.3. Possibility of Hazardous Reactions | Reacts with strong oxidants. |
| 10.4. Conditions to Avoid | |
| Conditions to avoid: | Avoid heat, open fire and other ignition sources. |
| Thermal decomposition: | approx. 200°C |
| 10.5. Incompatible Materials | No information available. |
| 10.6. Hazardous Decomposition Products | No information available. |

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10.7. Further Information

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral: 1350 mg/kg (rat)

LD50, dermal:

No information available.

LC50, inhalation:

No information available.

Primary effects

Irritant effect on skin:

No information available

Irritant effect on eyes:

No information available.

Inhalation:

No information available.

Ingestion:

No information available

Sensitization:

No relevant data found.

Mutagenicity:

No relevant data found.

Reproductive toxicity:

No relevant data found.

Carcinogenicity:

No relevant data found.

Teratogenicity:

No information available.

Specific target organ toxicity (STOT):

No relevant data found.

Additional toxicological information:

12. Ecological Information

12.1. Aquatic Toxicity

No toxicity expected.

Fish toxicity:

Daphnia toxicity:

Bacteria toxicity:

Algae toxicity:

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12.2. Persistency and Degradability

Not very soluble in water.

12.3. Bioaccumulation

No information available.

12.4. Mobility

No information available.

12.5. Results of PBT- und vPvP Assessment

No data available.

12.6. Other Adverse Effects

Water hazard class:

3, hazardous

Behaviour in sewage systems:

Further ecological effects:

*Avoid subsoil penetration. Prevent product from entering drains.
Do not contaminate surface water.*

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:

Dispose of according to official national and local regulations.

European Waste Code (EWC):

Uncleaned packaging:

Dispose of according to official local regulations.

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA 3077

14.2. UN Proper Shipping Name

ADR/RID: UMWELTGEFÄHDENDER STOFF, FEST, N.A.G.
(Kupferverbindung)

IMDG/IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Copper Compound)

14.3. Transport Hazard Classes

ADR Class: 9

Hazard no.: 9

Classification code: M7

Tunnel restriction code:

IMDG Class (sea): 9

Hazard no.: 9

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| | | |
|--------|--|--|
| | <i>EmS No.:</i> | <i>F-A, S-F</i> |
| | <i>IATA Class:</i> | <i>9</i> |
| | <i>Hazard no.:</i> | <i>9</i> |
| 14. 4. | Packaging Group | |
| | <i>ADR/RID:</i> | <i>III</i> |
| | <i>IMDG:</i> | <i>III</i> |
| | <i>IATA:</i> | <i>III</i> |
| 14. 5. | Environmental Hazards | |
| | | <i>Labelling according 5.2.1.8 ADR/RID: fish and tree</i> <i>Labelling according 5.2.1.6.3 IMDG: fish and tree</i> <i>Labelled with "P" according 2.10 IMDG: yes</i> |
| 14. 6. | Special Precautions for User | |
| | | <i>not applicable</i> |
| 14. 7. | Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code | |
| | | <i>not applicable</i> |
| 14. 8. | Further Information | |
| | | <i>Do not store together with foodstuffs.</i> |

15. Regulatory Information

15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

Water hazard class:

3, very hazardous for water (German Regulation)

Local regulations on chemical accidents:

Employment restrictions:

Restriction and prohibition of application:

Technical instructions on air quality:

15. 2. Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

15. 3. Further Information

16. Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.