



## Aquarius Marine Coatings Ltd Safety Data Sheet

Revision Date 01/06/15

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

#### 1.1 Product identifier

Trade name: Copper powder  
 MSDS number: MMP CU1  
 CAS number: 7440-50-8  
 EINECS number: 231-159-6  
 Reach Registration No: 01-2119480154-42-XXXX

#### 1.1 Main application of the substance:

Marine Anti Foul

For information in respect of other identified uses contact the supplier.

#### 1.2.1 Uses advised against:

Non identified.

#### 1.3 Details of the supplier of the safety data sheet

Company Name:  
 Aquarius Marine Coatings Ltd  
 Unit 10, St. Patricks Industrial Estate  
 Shillingstone  
 Blandford  
 Dorset, DT11 0SA  
 Tel: +44 (0) 1258 861059  
 Fax: +44 (0) 1258 861220

#### Further information obtainable from:

info@coppercoat.com

#### 1.4 Emergency telephone number

+44 (0) 1258 861059 (during office hours)

### 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance

##### 2.1.1 Classification according to Regulation (EC) No. 1272/2008

Aquatic Acute 1 Hazard statement: H400: Very toxic to aquatic life.

Aquatic Chronic 3 Hazard statement: H412: Harmful to aquatic life with long lasting effects.

##### 2.1.2 Classification according to Directive 67/548/EEC

N-Dangerous for the environment.

R50 - very toxic to aquatic organisms.

R53 – may cause longterm effects in the aquatic environment.

#### 2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008

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

#### Hazard pictogram:



GHS09


 ENVIRONMENTALLY HAZARDOUS  
 SUBSTANCES, SOLID  
 N.O.S. UN 3077

**Signal word:** Warning

**Hazard statement:** H400: Very toxic to aquatic life

**Hazard statement:** H412: Harmful to aquatic life with long lasting effects.

**Precautionary statements:**

P273: Avoid release to the environment.

P391: Collect spillage.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other Hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable

**VPvB:** Not applicable

3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substance characterization:** Copper in powder form 95% minimum purity.

**CAS No.** 7440-50-8

**EINECS Number:** 231-159-6

4: FIRSTAID MEASURES

**4.1 Description of first aid measures**

**General information:**

Get medical attention if any discomfort develops.

Show this safety data sheet to the doctor in attendance.

**Following inhalation:** Supply fresh air; if discomfort continues, seek medical attention.

**Following skin contact:** Use general hygiene measures for contact with the material: wash with soap and warm water. Generally the product does not irritate the skin.

**Following eye contact:** Flush eyes thoroughly with water, taking care to rinse under eyelids. Remove contact lenses. If discomfort continues, seek medical attention.

**Following ingestion:** Do not induce vomiting. Seek medical attention.

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

No further relevant information available.

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

No further relevant information available.

5: FIREFIGHTING MEASURES

**5.1 Extinguishing media**

**Suitable extinguishing media:**

Dry sand, dry powder extinguisher.

Fire blanket.

**For safety reasons unsuitable extinguishing agents:** Water, halogenated media.

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

Material is non flammable.

**5.3 Advice for firefighters:** Wear protective suit and gloves.

6: ACCIDENTAL RELEASE MEASURES

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

Avoid formation of dust.

Ensure adequate ventilation.

Avoid inhalation of dust and fumes.

Wear suitable protective equipment.

**6.2 Environmental precautions:** Do not allow the product to enter the sewage system or any water course.

**6.3 Methods and material for containment and cleaning up:** Collect using a shovel or an appropriate industrial vacuum cleaner.

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.

## 7: HANDLING AND STORAGE

### Handling:

#### 7.1 Precautions for safe handling:

Prevent formation of dust.  
Store in a cool dry place in tightly closed receptacles.  
Ensure good ventilation.  
Avoid contact with heat.

#### 7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, dry location in tightly closed receptacles.

#### Information about storage in shared storage facility:

Store away from flammable substances.  
Store away from oxidizing agents and acids.

#### 7.3 Additional information:

Protect from humidity and water contact.  
Keep opened containers sealed.

## 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Ingredients that require monitoring at the workplace:

##### Copper 7440-50-8

#### Exposure limit values:

Short term value: 2mg/m<sup>3</sup> (dusts and mists)  
Long term value: 0.2mg/m<sup>3</sup> (fume), 1mg/m<sup>3</sup> (dusts and mists)

#### DNELs

Long term systemic effects 0.041mg/kg bw/d (human) (oral, dermal and inhalation)  
Short term systemic effects 0.082mg/kg bw/d (human) (oral, dermal and inhalation)

#### PNECs

Environmental sediment estuarine 288mg/kg dry weight  
Environmental sediment freshwater 87mg/kg dry weight  
Environmental sediment marine 676mg/kg dry weight  
Environmental soil 65.5mg/kg dry weight  
Environmental freshwater 7.8ug/l dissolved copper  
Environmental marine water 5.2u/l dissolved copper

### 8.2 Exposure controls:

#### General hygiene measures:

No smoking, eating or drinking in the work area. Wash hands regularly.

#### Engineering Controls:

Use local ventilation to keep values below the threshold values.

#### Respiratory protection:

Suitable filter type respirator recommended. Filter FF P2

#### Protection of hands:

Use of a barrier cream is recommended.  
Use of safety gloves is recommended.

#### Eye protection:

Use of suitable safety glasses recommended.

#### Body protection:

Protective work clothing to be worn.

## 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>(a) Appearance:</b>	Solid, copper colour.
<b>(b) Odour:</b>	Odourless
<b>(c) Odour threshold</b>	Not applicable as odourless.
<b>(d) pH</b>	Not applicable to an inorganic solid
<b>(e) Melting point</b>	1083°C
<b>(f) Initial boiling point</b>	Not applicable to a solid that melts >300°C and boiling range.
<b>(g) Flash point</b>	Not applicable to an inorganic solid
<b>(h) Evaporation rate</b>	Not applicable to an inorganic solid
<b>(i) Flammability</b>	Non-flammable
<b>(j) Upper/lower flammability or explosive limits</b>	Not applicable
<b>(k) Vapour pressure</b>	Not applicable to a solid that melts >300°C
<b>(l) Vapour density</b>	Not applicable to an inorganic solid.
<b>(m) Relative density</b>	8.9g/cm <sup>3</sup> at 20°C
<b>(n) Solubility(ies)</b>	Insoluble – copper needs to be transformed into a copper compound to become soluble. A solubility test (OECD 105) demonstrated a solubility of <1mg Cu/L for a copper powder
<b>(o) Partition coefficient n-octanol/water</b>	Not applicable to inorganic substances.
<b>p) Auto-ignition temperature</b>	No auto-ignition
<b>(q) Decomposition temperature</b>	Decomposition and/or melting starts at 1083°C
<b>(r) Viscosity</b>	Not applicable to an inorganic solid.
<b>(s) Explosive properties</b>	Non explosive. The substance does not contain chemical groups associated with explosive properties
<b>(t) Oxidising properties</b>	Non-oxidising substance.

## 10: STABILITY AND REACTIVITY

**10.1 Reactivity:** Not applicable (See section 9)

**10.2 Chemical stability**

Under normal conditions of use and storage, the product is stable.

**10.3 Possibility of hazardous reactions**

Reaction with H- equivalents releases soluble copper compounds.

**10.4 Conditions to avoid**

Avoid dust formation and contact with acids.

**10.5 Incompatible materials**

Strong acids

**10.6 Hazardous decomposition products**

The element Cu<sup>0</sup> does not decompose but may be transformed into other metal forms (e.g. Cu<sup>2+</sup>).

## 11: TOXICOLOGICAL INFORMATION

**11.1 Acute toxicity:**

Oral, Inhalation & Dermal - Not Classified.

**Primary irritant effect:**

**Skin irritant:** No irritant effect. Not a skin sensitizer.

**Eye irritant:** No irritant effect.

**Inhalation:** Inhalation of large quantities may cause irritation and give rise to symptoms similar to metal fume fever.

## 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Aquatic toxicity:** Does not meet the classification for chronic aquatic toxicity.

**Other adverse effects:** Copper is not expected to contribute to ozone depletion, ozone formation, global warming or acidification.

**PBT:** Not applicable.

**VPvB:** Not applicable.

## 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods:

**Product disposal:** Contact supplier for recycling information. Dispose as hazardous waste using the applicable EWC. Do not allow to enter the water course or sewage system.

**Packaging disposal:** Disposal should be in line with the local authority regulations and EWC.

## 14: TRANSPORT INFORMATION

### Land transport ADR/RID (cross border)

<b>ADR/RID class:</b>	<b>9 (miscellaneous dangerous substances)</b>
<b>UN Number:</b>	<b>3077 (environmentally hazardous substance)</b>
<b>Packaging group:</b>	<b>III</b>
<b>Hazard label:</b>	<b>9</b>
<b>Special marking:</b>	<b>Symbol fish and tree (maritime pollutant)</b>
<b>UN shipping name:</b>	<b>Environmentally Hazardous Substance, Solid, N.O.S. (copper metal powder)</b>

### Maritime transport IMDG:

<b>IMDG Class:</b>	<b>9</b>
<b>UN Number:</b>	<b>3077</b>
<b>Label:</b>	<b>9</b>
<b>Packaging group:</b>	<b>III</b>
<b>EMS Number:</b>	<b>F-A,S-F</b>
<b>Maritime pollutant:</b>	<b>Yes (symbol fish and tree)</b>
<b>Proper shipping name:</b>	<b>Environmentally Hazardous Substance, Solid ,N.O.S (copper metal powder)</b>

### Air transport ICAO-TI and IATA-DGR:

<b>ICAO/IATA Class:</b>	<b>9</b>
<b>UN number:</b>	<b>3077</b>
<b>Packaging group:</b>	<b>III</b>
<b>Label:</b>	<b>9</b>
<b>Special marking:</b>	<b>Symbol fish and tree (maritime pollutant)</b>
<b>Proper shipping name:</b>	<b>Environmentally Hazardous Substance, Solid, N.O.S. (copper metal powder)</b>

## 15: REGULATORY INFORMATION

### 15.1 Safety, Health and environmental regulations/legislation specific for the substance:

Copper is not an ozone depleting substance.

Copper is not a persistent organic pollutant.

**15.2 Chemical safety assessment:** A chemical safety assessment has been carried out.

## 16: OTHER INFORMATION

The data herein are based on our latest knowledge but do not constitute a guarantee for any specific product features and do not establish any legally valid contractual relationship.

This Safety Data Sheet has been prepared in accordance with the requirements of Regulation 1907/2006/EC Article 31 and Regulation 2172/2008 CLP.

### **Department responsible for the issue:**

Quality Assurance and Data Sheet Management.

### **Contact:**

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### **Abbreviations:**

REACH: EC Regulation on Registration, Evaluation and Authorisation of Chemicals (Regulation (EC) No 1907/2006 as amended)

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulations concerning the International Transport of Dangerous Goods by Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association.

ICAO: International Civil Aviation Organisation.

ICAO-TI: Technical Instructions by the International Civil Aviation Organisation.

CLP: Classification, Labelling and Packaging.

PBT: Persistent, Bioaccumulative and Toxic.

VPvB: Very Persistent, Very Bioaccumulative.

EINECS: European Inventory of Existing Commercial Chemical Substances.

CAS: Chemical Abstracts Service.