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

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/m3 (dusts and mists)
Long term value: 0.2mg/m3 (fume), 1mg/m3 (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

(a) Appearance:	Solid, copper colour.
(b) Odour:	Odourless
(**c) Odour threshold**	Not applicable as odourless.
(d) pH	Not applicable to an inorganic solid
(e) Melting point	1083°C
(**f) Initial boiling point**	Not applicable to a solid that melts >300°C and boiling range.
(g) Flash point	Not applicable to an inorganic solid
(h) Evaporation rate	Not applicable to an inorganic solid
(i) Flammability	Non-flammable
(j) Upper/lower flammability or explosive limits	Not applicable
(k) Vapour pressure	Not applicable to a solid that melts >300°C
(l) Vapour density	Not applicable to an inorganic solid.
(m) Relative density	8.9g/cm3 at 20°C
(n) Solubility(ies)	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
(**o) Partition coefficient n-octanol/water**	Not applicable to inorganic substances.
p) Auto-ignition temperature	No auto-ignition
(q) Decomposition temperature	Decomposition and/or melting starts at 1083°C
(r) Viscosity	Not applicable to an inorganic solid.
(s) Explosive properties	Non explosive. The substance does not contain chemical groups associated with explosive properties
(t) Oxidising properties	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° does not decompose but may be transformed into other metal forms (e.g. Cu2+).

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)

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

Maritime transport IMDG:

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

Air transport ICAO-TI and IATA-DGR:

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

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.

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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.