

SAFETY DATA SHEET – FLINTS NATURAL COPPER METALLIC POWDER

1. IDENTIFICATION OF SUBSTANCE/PREPARATION & COMPANY

Product Name / Code: FLINTS NATURAL COPPER METALLIC POWDER / DPP055

REACH Key Notes: Flake Copper Powder >99%
CAS No: 7440-50-8
EC No: 231-159-6

Application of Substance: Inorganic (Metallic) Pigment, lubricant. Suitable for making bright metallic paints when mixed with a glaze.

Company: Flints Theatrical Chandlers Ltd
Unit 9 Deptford Trading Estate
Blackhorse Road
SE8 5HY

Telephone: +44 (0) 20 7703 9786

Email: sales@flints.co.uk

Telephone operated from 08:30 – 17:30 Monday to Friday, 09:00 – 14:00 Saturday.
In an emergency, seek advice from a medical professional.

2. HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]:
Aquatic Acute 1, Aquatic Chronic 3.

Label elements

Labeling according to Regulation (EC) No 1272/2008 [CLP]



Pictogram: GHS09

Signal word: Danger

Hazard statement(s): H400 Very Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s) P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations

Other hazards:

The substances in the mixture do not meet the criteria for PBT or vPvB substances

Classification System is according to latest editions of EU lists and is extended by company and literature data.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Description of Material: Copper powder

Synonyms: None

Chemical Composition:

INECS N°	CAS N°	INDEX N°	Chemical name	Conc. (% w/w)	Hazard class and category code	Hazard statement
231-159-6	7440-50-8	N/A	Copper	>99	Aquatic Acute 1 Aquatic Chronic 3	H400 H412

4. FIRST AID MEASURES

General Advice: First aid followed by medical attention.

Eyes: Rinse opened eye for several minutes under running water. Seek medical attention if irritation persists.

Skin: Wash with mild soap and water. Generally the product does not irritate the skin. Seek medical advice if irritation occurs/persists.

Ingestion: Wash out mouth with water, seek medical attention if symptoms occur.

Inhalation: Move exposed person to fresh air. Keep warm and at rest. Seek medical attention as soon as possible.

Most Important Symptoms: Exposure by inhalation (large quantities) will produce symptoms called metal fume fever, influenza type symptoms which last 24-48 hours.

Copper may cause irritation to upper respiratory tract, metallic taste, discoloration of skin and hair. Ingestion or inhalation of large quantities may cause nausea or vomiting.

Dust irritates nose and trachea, in certain individuals skin contact for long periods may cause irritation and possible dermatitis.

Copper may cause gastro enteric problems.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry sand, dry powder extinguisher, fire blanket.

Extinguishing Media: Liquid based extinguishers must not be used on molten metal.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear protective equipment. Keep unprotected persons away. Avoid formation of dust.
Environmental precautions:	Do not allow product to reach ground water, water bodies or sewerage system.
Methods for cleaning up:	Pick up manually or vacuum.
Reference to other sections:	See also sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Conditions for safe storage:	Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Control Parameters:

Exposure limit values:	TLV - TWA (ACGIH, 2009) Cu 0.2 mg/m ³ (fumes); TLV - TWA (ACGIH, 2009) Cu 1 mg/m ³ (dusts and mists);
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EXPOSURE PATTERN	ROUTE	DESCRIPTOR	DNEL
Human- Long-term - systemic effects	Oral, dermal and inhalation	Internal dose DNEL (Derived No Effect Level) Using absorption factors of 25% for oral, 100% for inhalation (respirable) and 0.03% for dermal exposure routes	0.041mg Cu/kg body weight/day
Human- Short-term - systemic effects	Oral, dermal and inhalation	Internal dose DNEL (Derived No Effect Level) Using absorption factors of 25% for oral, 100% for inhalation (respirable) and 0.03% for dermal exposure routes	0.082mg Cu/kg body weight/day
Human- Short-term - effects- drinking water	Oral	A NOAEL for drinking water	4 mg/l

National exposure control limits must be considered where appropriate.

Exposure Controls:

Appropriate engineering controls:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
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Personal Protective equipment:

Ventilation:	Preferably Local exhaust ventilation (LEV) must be sufficient to keep concentration below occupational exposure limit.
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Respiratory protection:	Particulate cartridge filter type when LEV cannot be supplied.
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Hand Protection:	Gloves: consult manufacturer for suitable specification. A suitable barrier cream is recommended.
Eye Protection:	Tight safety goggles.
Body Protection:	Protective work clothing.
General Safety and Hygiene:	Do not eat or drink while working with the product. Wash hands before breaks and at the end of work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Copper coloured powder
Odour:	Odourless. No data available for odour threshold
pH:	No data available
Melting / freezing point:	1083°C
Initial boiling point / boiling range:	2597 °C
Flash point:	No data available
Evaporation point:	No data available
Flammability:	Product is not self-igniting
Vapour pressure / density:	No data available
Relative density:	0.6-1.4 g/cm ³ at room temperature (20°C)
Specific weight:	8.9 g/cm ³ at room temperature (20°C)
Water solubility:	Cu: Insoluble - copper needs to be transformed into a copper compound to become soluble. A solubility test (OECD 105) demonstrated a solubility of <1 mg Cu/l for a copper powder.
Partition coefficient:	n octanol/water: No data available
Auto-ignition temperature:	No auto-ignition
Decomposition temperature:	Decomposition/melting begins at 1083°C
Explosive properties:	Non explosive
Oxidising properties:	Not oxidizing substance

10. STABILITY AND REACTIVITY

Reactivity:	No decomposition in usual conditions
Chemical stability:	Stable under normal conditions of use. Possibility of hazardous reactions. May yield hydrogen and noxious copper compounds if affected by unsuitable materials.
Conditions to avoid:	Avoid dust formation and contact with acids

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Incompatible materials: Strong acids

Hazardous decomposition products: No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Copper
 Oral: LD-50 rats >2000mg/kg body weight. Not classified.
 Dermal: Not classified
 Inhalation: Fractions with d50 > 10 µm not classified.
 Fractions with <10 µm LD-50 rats 1-5 g/m³ air

Skin corrosion/irritation: Not classified

Serious eye damage/eye irritation: Not classified

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

**Specific target organ toxicity
 - single exposure:** Not classified

**Specific target organ toxicity
 - repeated exposure:** Not classified

Aspiration hazard: Not classified

12. ECOLOGICAL INFORMATION

Toxicity:

Acute aquatic toxicity: Cu: Toxicity for pH = 5.5-6.5 L(E)C50 of 25.0 µ g Cu/L (Van Sprang et al., 2010, in Copper Chemical Safety Report (CSR), 2010). M-factor: 1.

Chronic freshwater toxicity: Cu: Not classified (Predicted No-Effect Concentration (PNEC): 7,8 µ g/l is the value of dissolved Cu/l to be used to assess local risks).

Chronic marine waters toxicity: Cu: Not classified (PNEC: 5.2 µ g/l is the value of dissolved Cu/l to be used to assess local risks).

Chronic freshwater sediment toxicity: Cu: Freshwater sediment PNEC is: 87 mg Cu/kg dry sediment weight.

Soil toxicity: Cu: Soil PNEC: 65.5 mg Cu/kg dry weight of soil.

Persistence and degradability: Not classified

Bioaccumulative potential: Not classified

Mobility in soil: Cu: Copper-ions bind strongly to the soil matrix. The binding depends on the soil properties. A median water-soil partitioning coefficient (Kp) of 2120 L/kg has been derived.

Results of PBT and vPvB assessment: The mixture does not contain PBT or vPvB substances.

Other adverse effects

Copper is not expected to contribute to ozone depletion, ozone formation, global warming or acidification.

13. DISPOSAL INFORMATION

Product:

Remove in accordance with local official regulations. Dispose of at a hazardous waste landfill. Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Used packaging material:

Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14. TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA
14.1 UN number	3077	3077	3077
14.2 UN Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (COPPER POWDER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (COPPER POWDER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (COPPER POWDER)
14.3 Transport Hazard Class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental Hazards	Classified as hazardous	Classified as hazardous	Classified as hazardous
14.6 Special Precautions for user	(*)	EmS: F-A, S-F (*)	(*)
14.7 Transport in Bulk according to Annex II of Marpol73/78 and the IBC code	Not applicable	Not applicable	Not applicable
14.8 Labelling			
(*) - The transport, comprising charge and discharge, must be made by people who have been trained on 'Dangerous Goods Regulations'			

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

The mixture is NOT subject to:

- Regulation (EC) n. Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer;
- Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants;
- Regulation (EC) n. 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals.

Chemical Safety Assessment has been carried out for copper.

16. OTHER INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

This data sheet is provided under CLP and REACH Regulation and is not intended to constitute an assessment of work place risk associated with product(s) used as required under any other Health and Safety Regulation.

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Disclaimer: Every care is taken in compiling this information and is believed accurate and reliable as of the date indicated. However, Flints Theatrical Chandlers Ltd disclaims all liability for any loss, damage or expense arising from any inaccuracy therein. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own use.