



SAFETY DATA SHEET BRASS METAL POWDER

PRODUCT SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifiers

Product Name:	Brass Powder
CAS-No.:	Mixture
EC No.:	Mixture
REACH registration number (Copper)	01-2119480154-42-XXXX
REACH registration number (Zinc)	01-2119467174-37-XXXX
Unique Formula Identifier (UFI)	Not applicable
Nanoform	Not applicable

1.2. Relevant Identified uses of the substance or mixture and uses advised against

Relevant Identified Uses: Powder Metallurgy, Additive Manufacturing, Brazing Alloys, Fillers, Decorative Castings/Coatings, Functional Coatings.

Uses advised against: None identified.

1.3. Company/undertaking identification

Easy Composites Ltd
Unit 39,
Park Hall Business Village
Longton, Stoke-on-Trent
ST3 5XA
United Kingdom

sales@easycomposites.com
+44 (0)1782 454499

1.4. Emergency Contact Information

Emergency tel: +44 (0) 1782 454499
(office hours only)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Aquatic Acute 1; H400
Aquatic Chronic 1; H410
Aquatic Chronic 2; H411

Easy Composites SDS - Brass Metal Powder

2.2. Label elements according to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal word:

Warning

Hazard statement(s)

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

H411 Toxic 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

Supplemental Information

Not applicable

2.3. Other hazards

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

Product does not contain substances with endocrine disrupting properties in percentage $\geq 0.1\%$

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Description of Material: **Copper Zinc Alloy**

Synonyms: None

Chemical Composition:

Substance	EC N°	CAS N°	REACH registration N°	Conc. (% w/w)	Hazard class and category code	Specific concentration limit (SCL), M-Factor, Acute toxicity estimate (ATE)
Copper	231-159-6	7440-50-8	01-2119480154-42-XXXX	50-90	H400; Aquatic Acute 1 H411; Aquatic Chronic 2	M(Chronic)=1
Zinc	231-175-3	7440-66-6	01-2119467174-37-XXXX	10-50	H400; Aquatic Acute 1 H410; Aquatic Chronic 1	M=1 M=1

3.2 Mixtures

Not applicable

Note: For full text of H phrases see section 16

Easy Composites SDS - Brass Metal Powder

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice:	First aid followed by medical attention.
Inhalation:	Move exposed person to fresh air. Keep warm and at rest. Seek medical attention as soon as possible.
Skin contact:	Wash with mild soap and water. Generally the product does not irritate the skin. Seek medical advice if irritation occurs/persists.
Eye Contact:	Rinse opened eye for several minutes under running water. Seek medical attention if irritation persists.
Ingestion:	Wash mouth out with water, seek medical attention if symptoms occur.

4.2 Most Important Symptoms and effects, both acute and delayed

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.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

5. FIRE FIGHTING MEASURES

5.1 Suitable Extinguishing Media:

Dry sand, dry powder extinguisher, fire blanket.

Extinguishing Media not suitable for safety reasons:

Liquid based extinguishers must not be used on molten metal.

5.2 Special hazards arising from the substance or mixture:

Fire risk is slight but finely divided dust may create an explosive mixture with air. May decompose in a fire giving off toxic fumes. Decomposition products: Carbon monoxide, Carbon dioxide, metal oxides.

5.3 Advice for firefighters:

General Information

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. Contain fire control water for later disposal.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

No action should be taken involving personal risk. Ensure adequate ventilation. Avoid breathing dust. Avoid formation of dust. Wear appropriate personal protective equipment, avoid direct contact. Remove all ignition sources. Damp down to avoid dust generation. Evacuate the area and keep personnel upwind.

Easy Composites SDS - Brass Metal Powder

6.2 Environmental precautions:

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Dyke area to contain the spill and prevent releases to sewers, drains, or other waterways. Spillages or uncontrolled discharges into soil must be alerted to the appropriate regulatory body.

6.3 Methods for cleaning up:

Dusts/solid: Damp down to avoid dust generation. Use vacuum equipment for collecting spilt materials, where practicable. Recover the product where possible. Transfer to a lidded container for disposal or recovery. Ventilate the area and wash spill site after material pick-up is complete. Dry sweeping is not recommended. If necessary, light water spray will reduce dust for dry sweeping, but over-wetting may produce slippery walking surfaces.

6.4 Reference to other sections:

See also sections 8 and 13

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

When using do not eat or drink. Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures. Avoid inhalation of dusts. Avoid contact with heated or molten product. Wash contaminated clothing before reuse. Damp down to avoid dust generation. Avoid dust generation. Wash hands thoroughly after handling. Keep good industrial hygiene. Normal measures for preventive fire protection.

7.2 Conditions for safe storage including any incompatibilities:

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end uses:

See section 1.2

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Occupational exposure limits

Workspace Exposure Limits

Copper 7440-50-8, average daily value (8hr TWA): 1 mg/m³ (dusts and mists)
 (Ref: EH40/2005 as consolidated with amendments Jan 2020.) 0.2 mg/m³ (fumes)

Zinc 7440-66-6, average daily value (8hr TWA): 10 mg/m³ (dusts and mists)
 (Ref: ACGIH, 2009 – Zinc not listed in EH40/2005) 5 mg/m³ (fumes)

PNEC's and DNEL's

Copper 7440-50-8 Derived no effect level DNEL	Oral	Inhalation	Dermal
Worker – Systemic Long Term	-	0.041 mg/m ³	137 mg/kg bw/day
Worker – Acute	-	9 mg/m ³	273 mg/kg bw/day
Consumer - Long Term - Systemic effects	0.041 mg/kg bw/day	0.041 mg/m ³	137 mg/kg bw/day
Consumer - acute - Systemic effects	4 mg/l	9 mg/m ³	237 mg/kg bw/day
Consumer - Long Term - Local effects	-	1 mg/m ³	-
Consumer - acute - Local effects	-	1 mg/m ³	-

Copper Predicted No Effect Concentration PNEC	Value
Freshwater - dissolved copper (µg Cu/L)	7.8 µg Cu/L
Marine water- dissolved copper (µg Cu/L)	5.2 µg Cu/L
Freshwater Sediment (mg/kg Sediment dw)	87 mg/kg Sediment dw
Marine water Sediment (mg/kg Sediment dw)	676 mg/kg Sediment dw
Soil (mg/kg soil dw)	65 mg/kg soil dw

Easy Composites SDS - Brass Metal Powder

Zinc 7440-66-6 Derived no effect level DNEL	Oral	Inhalation	Dermal
Worker – Systemic Long Term	-	-	-
Worker – Acute	-	-	-
Consumer - Long Term - Systemic effects	-	-	-
Consumer - acute - Systemic effects	-	-	-
Consumer - Long Term - Local effects	-	-	-
Consumer - acute - Local effects	-	-	-

National exposure control limits must be considered where appropriate.

8.2 Exposure Controls:

8.2.1 Appropriate engineering controls

Ensure adequate ventilation. Ideally Local exhaust ventilation (LEV) must be sufficient to keep concentration below occupational exposure limit. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Ensure eye flushing stations are located close to the workplace.

8.2.2 Individual protection measures such as personal protective equipment

Use personal protective equipment as required. Good hygiene practices and housekeeping measures. Wash hands before breaks and after work. Do not eat, drink or smoke at the work place. Keep good industrial hygiene. Avoid breathing dust. Wash contaminated clothing before reuse. 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:

Use eye protection according to EN 166, designed to protect against dusts.

Skin protection:

Hand protection: Prolonged, direct contact: Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Recommended: Nitrile rubber.

Body protection: Wear suitable coveralls to prevent exposure to the skin. Recommended: Safety shoes or boots - chemical resistant.

When molten: Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots.

Respiratory Protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protective equipment should conform to the appropriate EN standard. Recommended: Particle filter with high efficiency for solid particles (EN 143 or 149, Type P2 or FFP2, Associated Protection Factor (APF) = 10). A suitable mask with filter type A (EN14387 or EN405) may be appropriate. Recommended: 95%.

Thermal Hazards:

Molten material can cause severe burns. Do NOT try to peel molten material from the skin. Cool rapidly with water. Avoid contact with heated or molten product.

8.2.3 Environmental exposure controls:

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Physical state: solid (powder)
- b) Colour: yellow to green/yellow

Easy Composites SDS - Brass Metal Powder

c) Odour:	odourless
d) Melting point/freezing point:	860 – 1050°C
e) Boiling point or initial boiling point and boiling range:	not applicable to a solid that melts >300 °C
f) Flammability:	non-flammable
g) Lower and upper explosion limit:	not applicable
h) Flash point:	not applicable - solid
i) Auto ignition temperature:	not determined
j) Decomposition temperature:	not determined
k) pH:	not applicable - inorganic solid
l) Kinematic viscosity:	not applicable - solid
m) Solubility:	insoluble
n) Partition coefficient: n octanol/water:	no data available
o) Vapour pressure:	not applicable - solid
p) Density and/or relative density:	8.0-8.7 g/cm ³ at 20°C / 2-4 g/cm ³ at 20°C
q) Relative vapour density:	not applicable - solid
r) Particle characteristics:	no data available

9.2 Other Safety Information

Oxidising properties:	not oxidising
Explosive properties:	not explosive

10. STABILITY AND REACTIVITY

10.1 Reactivity

No decomposition in usual conditions

10.2 Chemical stability

Stable under normal conditions of use

10.3 Possibility of hazardous reactions

May yield hydrogen and noxious copper compounds if affected by unsuitable materials.

10.4 Conditions to avoid

Avoid dust formation and contact with acids

10.5 Incompatible materials

Strong oxidizing agents and mineral acids

10.6 Hazardous decomposition products

May decompose in a fire giving off toxic fumes. Decomposition products: Carbon monoxide, Carbon dioxide, metal oxides.

Easy Composites SDS - Brass Metal Powder

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No. 1272/2008

Acute toxicity - Ingestion:

Based on available data, the classification criteria are not met.

Acute toxicity - Inhalation:

Based on available data, the classification criteria are not met.

Acute toxicity - Skin Contact:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT - single exposure:

Based on available data, the classification criteria are not met.

STOT - repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Substance is not identified as having endocrine disrupting properties with respect to humans.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity:

Copper: Aquatic Acute 1; H400 Very toxic to aquatic life

Zinc: Aquatic Acute 1; H400 Very toxic to aquatic life

Chronic toxicity:

Copper: Aquatic Chronic 2; H411 Toxic to aquatic life with long lasting effects

Zinc: Aquatic Chronic 1; H410 Very toxic to aquatic life with long lasting effects

12.2 Persistence and degradability

Not applicable for inorganic substances

Easy Composites SDS - Brass Metal Powder

12.3 Bioaccumulative potential

Not classified

12.4 Mobility in soil

The substance has low mobility in soil.

12.5 Results of PBT and vPvB assessment

On the basis of available data the product does not contain any PBT or vPvB in percentage $\geq 0.1\%$

12.6 Endocrine disrupting properties

On the basis of available data the product does not contain substances listed under the main European lists of potential or suspected endocrine disruptors.

12.7 Other adverse effects

Copper and Zinc are not expected to contribute to ozone depletion, ozone formation, global warming or acidification.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

13.1.1 Product/Packaging disposal

Product disposal should be in accordance with local, state or national legislation. To be disposed of as hazardous waste. Ensure that all packaging is disposed of safely. Handle contaminated packages in the same way as the substance itself. Do not allow into any sewer onto the ground, or into any body of water. Used packaging materials: Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.


Waste classification according to directive 2008/98/EC:
(Waste Framework Directive)

Waste Code HP14

14. TRANSPORT INFORMATION:

	ADR/RID	ADN	IMDG	IATA/ICAO
14.1 UN or ID number	UN3077	UN3077	UN3077	UN3077
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)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (COPPER POWDER)
14.3 Transport Hazard Class(es)	9	9	9	9
14.4 Packing group	III	III	III	III
14.5 Environmental Hazards	Environmentally hazardous substance	Environmentally hazardous substance	Environmentally hazardous substance	Environmentally hazardous substance
14.6 Special Precautions for user	(*) Also see section 2		EmS: F-A, S-F (*) Also see section 2	(*) Also see section 2

Easy Composites SDS - Brass Metal Powder

14.7 Transport in Bulk according to Annex II of Marpol73/78 and the IBC code	Not applicable	Not applicable	Not applicable	Not applicable
14.8 Additional Information				
Labelling: (*) – The transport, comprising charge and discharge, must be made by people who have been trained on 'Dangerous Goods Regulations'				

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 including the amendment regulation 2020/878.

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

15.1.1 EU Regulations

EC Regulation (EC) No. 1907/2006 (REACH):

Annex XIV – List of substances subject to authorisation:	None of the components are listed.
Substances of very high concern (SVHC's):	None of the components are listed
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:	Not applicable

Other EU regulations

VOC content:	Not applicable
Ozone depleting substances (1005/2009/EU):	Not listed
Prior Informed Consent (PIC) (649/2012/EU):	Not listed
Persistent Organic Pollutants:	Not listed (inorganic)
Sevesto category - Directive 2012/18/EU:	Not applicable on <100 Tonnes

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out for brass. However a chemical safety assessment has been carried out for both copper and zinc.

16. OTHER INFORMATION

Products covered by this data sheet include: **Brass Powder** (All grades supplied by Ronald Britton)

Issue Date	:	09 May 2024
Revision Number	:	7b (updated ISO logo in footer)
Safety Data Sheet N ^o .	:	RB31

Literature references:

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878.

Easy Composites SDS - Brass Metal Powder

Full Text of H codes (see section 2 & 3)

Aquatic Acute 1; H400	Very toxic to aquatic life
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects
Aquatic Chronic 1; H410	Very toxic to aquatic life with long lasting effects.

Legend

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement on the International Transport of Dangerous Goods by Inland Waterways
RID	Regulations concerning the international railway transport of dangerous goods
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived No Effect Level
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
vPvB	very Persistent and very bioaccumulative
OECD	Organisation for Economic Cooperation and Development
SCL	Specific Concentration Limit

Disclaimer: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date compiled. However, no warranty, guarantee or representation is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.