

SAFETY DATA SHEET

according to Regulation (EC) No 1272/2008 (REACH)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: InnoMetal Copper

Other designations:-

MSDS-No.: DE_InnoMetal_MSDS_Kupfer_1_2

CAS number:

7440-50-8

- EC number:

231-159-6

- Index number:

029-024-00-X

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Identified use

Additional component

1.2.2 Uses advised against

No relevant information available

1.3. details of the supplier providing the safety data sheet.

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1.4. emergency number

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SECTION 2: Potential hazards

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aquatic Acute 1 H400 Very toxic to aquatic organisms.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Classification system:

The classification corresponds to the current EC lists, but is supplemented by information from the Specialist literature and through company information.

2.2 Marking elements

Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms



GHS09

Signal word: Caution

Hazard statements:

H400 Very toxic to aquatic organisms.

Safety instructions:

P273 Avoid release to the environment.

P391 Absorb spillage.

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

2.3 Other hazards

Inhalation of dust or smoke causes irritation of the respiratory tract. Inhalation of higher concentrations may cause fever.

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/Information on ingredients

3.1. substances

Classification (CLP):

CAS no.	EINECS	Chemical name	from %	to %	Hazard pictograms	Signal word	Danger warnings
7440-50-8	231-159-6	Copper powder		100	GHS09	Attention	H400, H411

SECTION 4: First aid measures

4.1 Description of first aid measures

No special measures required.

After inhalation: Supply fresh air, in case of complaints consult a doctor.
After skin contact: Wash/shower skin with water. In general, the product is not irritating to the skin.
After eye contact: Rinse opened eye for several minutes with running water.
Consult a doctor if symptoms persist.
After ingestion: Consult a doctor if symptoms persist.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3. indications for immediate medical help or special treatment

No further relevant information available.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Special powder for metal fires. Do not use water. Dry sand.
Unsuitable extinguishing media for safety reasons: Water

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

5.3 Advice for fire fighting

Special protective equipment for firefighters: No special measures required.
Additional notes: None.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of dust. Wear personal protective clothing. Do not breathe dust/fume/mist.

6.2 Environmental protection measures

Do not allow to enter drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Record mechanically.

6.4 Reference to other sections

See section 7 for safe handling information.
See section 8 for information on personal protective equipment.

SECTION 7: Handling and storage

7.1 Protective measures for safe handling

Information for safe handling: Avoid dust formation.
Information about fire and explosion protection: No special measures required.

7.2 Conditions for safe storage taking into account incompatibilities

Requirements to be met by storerooms and receptacles: Store in a cool, dry place in tightly closed containers.

Information about storage in one common storage facility: Do not store together with oxidising and acidic substances.

Further information on storage conditions: None.

Storage class: 13

7.3 Specific end uses

No further relevant information available.

SECTION 8: Exposure controls/personal protective equipment

8.1 Parameters to be monitored

Components with limit values that require monitoring at the workplace:	
7440-50-8 Copper	
AGW (Germany)	Long-term value: 1* 0.1** E mg/ m ³
MAK (Austria)	*Dust **Smoke; limit values currently out of force
	Short-term value: 4 E 0.4A*mg/m ³
	Long-term value: 1 E 0.1A*mg/m ³
	calculated as Cu; *as smoke

DNEL values

Copper:

Short-term DNEL (human, systemic effects): 0.082 mg Cu/kg B wt/d

Long-term DNEL (human, systemic effects): 0.041 mg Cu/kg B wt/d

Short-term NOAEL (human, oral, drinking water): 4 mg/l

PNEC values

Copper:

PNEC aqua (freshwater): 7.8 µg/l

PNEC aqua (marine water): 5.2 µg/l

PNEC sediment (freshwater): 87 mg Cu/kg dry wt

PNEC sediment (marine water): 676 mg Cu/kg dry wt

Additional notes: The lists valid at the time of compilation served as a basis.

8.2 Exposure controls and monitoring

Respiratory protection: Respiratory protection recommended. Filter P1 ,P2 ,P3

Hand protection: Preventive skin protection by using skin protectant is recommended.



Protective gloves

Eye protection: Safety goggles recommended during decanting.

Body protection: Protective work clothing

Protective and hygienic measures: The usual precautionary measures when handling chemicals must be observed. Wash hands before breaks and at the end of work.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: solid

Colour: Copper

Odour: Odourless

pH value: Not applicable.

Change of state

Melting point/Melting range: 1083 °C

Boiling point/boiling range: 2597 °C

Flash point: Not applicable.

Flammability (solid, gaseous): The substance is not flammable.

Ignition temperature: Not determined.

Decomposition temperature: Not applicable.

Self-ignition: The product is not self-igniting.

Explosion hazard: The product is not explosive.
Explosion limits:
Lower: Not applicable.
Upper: Not applicable.
Vapour pressure: Not applicable.
Density at 20 °C: 8.9 g/cm³
Bulk density: 0.5 - 5.5 g/cm³
Evaporation rate: Not applicable.
Solubility in / Miscibility with Water: Insoluble.
Partition coefficient (n-octanol/water): Not applicable.
Viscosity: Not applicable.
Particle properties (see section 3 for nanoforms)
Particle size: 1 - 500 µm

9.2 Other information

Appearance:
Form: Powder

9.2.1 Information on physical hazard classes

Explosive substances/mixtures and articles
with explosive not applicable

- Flammable gases not applicable
- Aerosols not applicable
- Oxidising gases not applicable
- Gases under pressure not applicable
- Flammable liquids not applicable
- Flammable solids not applicable
- Self-reactive substances and mixtures not applicable
- Pyrophoric liquids not applicable
- Pyrophoric solids not applicable
- Substances and mixtures capable of self-heating not applicable
- Substances and mixtures that come into contact with
Water flammable gases not applicable
- Oxidising liquids not applicable
- Oxidising solids not applicable
- Organic peroxides not applicable
- Substances that are corrosive to metals
and mixtures not applicable
- Desensitised substances/mixtures and
Products containing explosives Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if stored and handled as intended.

10.3 Possibility of hazardous reactions

Reacts with acids, alkalis and oxidising agents.

10.4 Conditions to avoid

No further relevant information available

10.5 Incompatible materials

No further relevant information available

10.6 Hazardous decomposition products

No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on hazard classes within the meaning of Regulation (EC) No 1272/2008

- Acute toxicity Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification: none
- Corrosive/irritant effect on the skin
Based on available data, the classification criteria are not met.
- Serious eye damage/irritation
Based on available data, the classification criteria are not met.
- Sensitisation of the respiratory tract/skin
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.
- Specific target organ toxicity at single exposure
Based on available data, the classification criteria are not met.
- Specific target organ toxicity in case of repeated exposure
Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.
- Additional toxicological information:
Inhalation of dust or smoke causes irritation of the respiratory tract. Inhalation of higher concentrations can cause fever.
- CMR effects (carcinogenic, mutagenic and toxic for reproduction)
Effect)
No further relevant information available.

11.2 Information on other hazards

Endocrine disrupting properties
The fabric is not included.

SECTION 12: Environmental information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

Do not allow to enter ground water, water bodies or sewage system.

12.5 Results of the PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

The product does not contain any substances with endocrine-disrupting properties.

SECTION 13: Disposal instructions

13.1 Waste treatment processes

Recommendation: Contact the manufacturer about recycling.

Must not be disposed of together with household waste. Do not allow to enter drains.

European Waste Catalogue

According to the European Waste Catalogue (EWC), waste code numbers are not product-related but application-related. Waste code numbers should be issued by the user, if possible in consultation with the waste management authorities.

16 00 00 WASTES NOT SPECIFIED ELSEWHERE IN THE LIST

16 03 00 Missing batches and unused products

16 03 03* inorganic wastes containing dangerous substances

Uncleaned packaging

Recommendation: Dispose of in accordance with official regulations.

SECTION 14: Transport information

14.1 UN number

ADR, IMDG, IATA: UN3077

14.2 UN proper shipping name

ADR: 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)

IMDG, IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)

14.3 Transport hazard classes

ADR:



Class: 9 Miscellaneous dangerous substances and articles

Hazard label: 9

IMDG, IATA:



Class: 9 Miscellaneous dangerous substances and articles.

14.4 Packing group

ADR, IMDG, IATA: III

14.5 Environmental hazards

Marine pollutant: Yes. Symbol (fish and tree)

Special marking (ADR): Symbol (fish and tree)
Special marking (IATA): Symbol (fish and tree)

14.6 Special precautions for the user

User Attention: Various dangerous substances and articles
Kemler number: 90 EMS number: F-A,S-F
Segregation groups not applicable
- Stowage Category A
- Stowage Code SW23 When transported in BK3 bulk container

14.7. carriage in bulk in accordance with Annex II of MARPOL 73/78 and the IBC Code.

Not applicable.

Transport/further information:

These substances, when carried in single or combination packagings of a net mass not exceeding 5 kg per single or inner packaging, are not subject to the other provisions of ADR/RID / IMDG, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

ADR

Excepted quantities (EQ): E1
Limited quantity (LQ) 5 KG
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g
Transport category 3
Tunnel restriction code invalidated

IMDG

- Limited quantities (LQ) 5 kg
- Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g

- UN "Model Regulation": UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (COPPER), 9, III

SECTION 15: Legislation

15.1. safety, health and environmental regulations/legislation specific to the substance or mixture.

Directive 2012/18/EU

- Quantity threshold (in tonnes) for application in lower tier establishments 100 t
- Quantity threshold (in tonnes) for application in upper-tier establishments 200 t

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in
Electrical and electronic equipment - Annex II

The fabric is not included.

- REGULATION (EU) 2019/1148

- Annex I - RESTRICTED EXPORT SUBSTANCES FOR EXPLOSIVES (Upper
concentration limit value for a permit pursuant to Article 5(3))

The fabric is not included.

- Annex II - EXPLOSIVES REPORTABLE FOR EXPLOSIVES

The fabric is not included.

- Regulation (EC) No 273/2004 on drug precursors

The fabric is not included.

- Regulation (EC) No 111/2005 laying down rules for the monitoring of the

Trade in drug precursors between the Community and third countries
The fabric is not included.

National regulations:

- Water hazard class: WGK 2 (list classification): clearly hazardous to water.

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Wording of P and H phrases:

The information is based on the current state of our knowledge, but it does not represent a
This does not constitute a warranty of product characteristics and does not establish a contractual legal
relationship.

- Relevant sentences

(only for explanation of H-phrases mentioned in the safety data sheet, e.g. in chapter 3)

16.2 Further information:

This Safety Data Sheet has been prepared to the best of our knowledge, information and belief
concerning this product as of the date shown in the footer of this document. The information is
provided as a guide for the safe and responsible use, storage, transport and processing of the product
and does not constitute a quality specification. The information relates only to the specific materials
indicated and does not apply to the use of these materials in combination with other materials or to
the use of these materials in processes unless specifically stated in the text. No rights may be derived
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