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

1.1. Product identifier

Product form : Substance
Trade name/designation : COPPER
Chemical name : Copper
EC-No. : 231-159-6
CAS-No. : 7440-50-8
REACH registration No : 01-2119480154-42
Product group : Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Intermediate,
Catalyst,
particulate,
Alloy,
Preparation,
dipping,
Powder,
Coating,
Spraying,
Article,
Welding .

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Trafigura Ventures V.B.V.
Evert van de Beekstraat 1-82
The Base, Tower B - 5th Floor
1118 CL Schiphol - The Netherlands
T +31 20 504 1800
TrafiguraReach@trafigura.com

1.4. Emergency telephone number

Emergency number : +32 3 575 03 30
This telephone number is available 24 hours per day, 7 days per week.


Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aquatic Acute 1 H400

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Full text of H statements : see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS09

Signal word :

Warning

Hazard statements (CLP) :

H400 - Very toxic to aquatic life.

Precautionary statements (CLP) :

P273 - Avoid release to the environment.
P391 - Collect spillage.

2.3. Other hazards

Other hazards :

Risk of dust explosion. PBT/vPvB data. This substance does not meet the PBT/vPvB criteria of REACH, annex XIII. This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance name :

COPPER

CAS-No. :

7440-50-8

EC-No. :

231-159-6

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Copper (Cu)	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6 (EC Index) -	~ 100	Aquatic Acute 1, H400

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice :

Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

Inhalation :

Keep at rest. Provide fresh air. If symptoms persist, call a physician.

Skin contact :


Wash skin with plenty of water. If symptoms persist, call a physician.

Eyes contact :

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion :

Rinse mouth. Call a physician immediately.

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

Inhalation : as offered : This product has no known adverse effect on human health. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Inhalation of fumes may cause metal fume fever.

Skin contact : No adverse effects are expected.

Eyes contact : No adverse effects are expected.

Ingestion : No adverse effects are expected.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

Hazardous decomposition products in case of fire : Copper oxides.

5.3. Advice for firefighters

Firefighting instructions : Special protective equipment for firefighters. In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Provide adequate ventilation. Use personal protective equipment as required. Reference to other sections: 8 . Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect in closed and suitable containers for disposal. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections


Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8 . Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Provide adequate ventilation. During handling operations: Do not breathe vapours/dust.

Hygiene measures : Keep good industrial hygiene.

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7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, well-ventilated place. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Packaging materials : Keep only in the original container.


7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (Cu) (7440-50-8)		
Austria	MAK (mg/m ³)	1 mg/m ³ (inhalable fraction) 0,1 mg/m ³ (respirable fraction, smoke)
Austria	MAK Short time value (mg/m ³)	4 mg/m ³ (inhalable fraction) 0,4 mg/m ³ (respirable fraction, smoke)
Belgium	Limit value (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Bulgaria	OEL TWA (mg/m ³)	0,1 mg/m ³ (metal vapor)
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	2 mg/m ³ (dust and fume)
Czech Republic	Expoziční limity (PEL) (mg/m ³)	1 mg/m ³ (dust) 0,1 mg/m ³ (fume)
Denmark	Grænseværdie (langvarig) (mg/m ³)	1 mg/m ³ (dust and powder) 0,1 mg/m ³ (fume)
Estonia	OEL TWA (mg/m ³)	1 mg/m ³ (total dust) 0,2 mg/m ³ (respirable dust)
Finland	HTP-arvo (8h) (mg/m ³)	0,02 mg/m ³ (respirable)
France	VME (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust)
France	VLE (mg/m ³)	2 mg/m ³ (dust)
Greece	OEL TWA (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust)
Greece	OEL STEL (mg/m ³)	2 mg/m ³ (dust)
Hungary	AK-érték	1 mg/m ³ 0,1 mg/m ³ (fume)
Hungary	CK-érték	4 mg/m ³ 0,4 mg/m ³ (fume)
Ireland	OEL (8 hours ref) (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dusts and mists)
Ireland	OEL (15 min ref) (mg/m ³)	0,6 mg/m ³ (calculated-fume) 2 mg/m ³ (dusts and mists)
Latvia	OEL TWA (mg/m ³)	0,5 mg/m ³
Lithuania	IPRV (mg/m ³)	1 mg/m ³ (inhalable fraction) 0,2 mg/m ³ (respirable fraction)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0,1 mg/m ³ (inhalable fraction)
Poland	NDS (mg/m ³)	0,2 mg/m ³

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Copper (Cu) (7440-50-8)		
Portugal	OEL TWA (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Romania	OEL TWA (mg/m ³)	0,5 mg/m ³ (powder)
Romania	OEL STEL (mg/m ³)	0,2 mg/m ³ (fume) 1,5 mg/m ³ (dust)
Slovakia	NPHV (priemerná) (mg/m ³)	1 mg/m ³ (dust) 0,1 mg/m ³ (fume)
Slovakia	NPHV (Hraničná) (mg/m ³)	2 mg/m ³ (dust) 0,2 mg/m ³ (fume)
Slovenia	OEL TWA (mg/m ³)	1 mg/m ³ (inhalable fraction) 0,1 mg/m ³ (respirable fraction, fume)
Slovenia	OEL STEL (mg/m ³)	4 mg/m ³ (inhalable fraction) 0,4 mg/m ³ (respirable fraction, fume)
Spain	VLA-ED (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Sweden	nivågränsvärde (NVG) (mg/m ³)	1 mg/m ³ (total dust) 0,2 mg/m ³ (respirable dust)
United Kingdom	WEL TWA (mg/m ³)	1 mg/m ³ (dust and mists) 0,2 mg/m ³ (fume)
United Kingdom	WEL STEL (mg/m ³)	0,6 mg/m ³ (calculated-fume) 2 mg/m ³ (dust and mist)
Norway	Grenseverdier (AN) (mg/m ³)	0,1 mg/m ³ (fume) 1 mg/m ³ (dust)
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	0,3 mg/m ³ (value calculated-fume) 2 mg/m ³ (value calculated-dust)
Switzerland	MAK (mg/m ³)	0,1 mg/m ³ (inhalable dust)
Switzerland	KZGW (mg/m ³)	0,2 mg/m ³ (inhalable dust)
Australia	TWA (mg/m ³)	1 mg/m ³ (dust and mist) 0,2 mg/m ³ (fume)
Canada (Quebec)	VEMP (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
USA - ACGIH	ACGIH TWA (mg/m ³)	0,2 mg/m ³ (fume)
USA - IDLH	US IDLH (mg/m ³)	100 mg/m ³ (dust, fume and mist)
USA - NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (dust and mist) 0,1 mg/m ³ (fume)
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	0,1 mg/m ³ (fume) 1 mg/m ³ (dust and mist)


8.2. Exposure controls

Engineering measure(s)

: Use only in area provided with appropriate exhaust ventilation. Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapours. Organisational measures to prevent /limit releases, dispersion and exposure. Avoid dust formation. Fumes. Take precautionary measures against static discharges. See also section 7.

Personal protective equipment

: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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Hand protection	: Not required for normal conditions of use
Eye protection	: Not required for normal conditions of use
Body protection	: Overalls, apron and boots recommended.
Respiratory protection	: Not required for normal conditions of use. In the case of respirable dust and/or fumes, use self-contained breathing apparatus. full face mask (DIN EN 136). Filter type: P (EN143)
Thermal hazard protection	: Use dedicated equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid.
Colour	: No data available.
Odour	: No data available.
Odour threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: ~ 1083 °C
Freezing point	: No data available
Initial boiling point and boiling range	: ~ 2567 °C
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: The product is not flammable.
Vapour pressure	: Not applicable
Vapour density	: Not applicable
Relative density	: No data available
Density	: ~ 8,89 g/cm ³ (@ 20°C)
Solubility	: Water: Insoluble in water
Partition coefficient n-octanol/water	: Not applicable
Kinematic viscosity	: No data available
Dynamic viscosity	: No data available
Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
Explosive limits	: Not applicable

9.2. Other information

No data available


SECTION 10: Stability and reactivity

10.1. Reactivity

Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

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10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. See also section 7.

10.5. Incompatible materials

Strong acids. Oxidising agent . See also section 7.

10.6. Hazardous decomposition products

CuOx.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified (Based on available data, the classification criteria are not met.)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met.) pH: Not applicable
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met.) pH: Not applicable
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met.)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met.)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met.)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met.)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met.)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met.)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met.)
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : Ecological injuries are not known or expected under normal use.

Copper (Cu) (7440-50-8)	
LC50 fish 1	0,0068 - 0,0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	(Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	< 0,3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

12.2. Persistence and degradability


COPPER (7440-50-8)	
Persistence and degradability	Not applicable.

12.3. Bioaccumulative potential

COPPER (7440-50-8)	
Partition coefficient n-octanol/water	Not applicable

12.4. Mobility in soil

COPPER (7440-50-8)	
Ecology - soil	No data available.

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12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

Additional information : Not applicable

SECTION 13: Disposal considerations

13.1. Waste treatment methods






Product/Packaging disposal recommendations : Dispose of contaminated materials in accordance with current regulations. Do not allow to enter into surface water or drains.

Additional information : Dispose of contaminated materials in accordance with current regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
NA	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
NA	Not applicable	Not applicable	Not applicable	Not applicable
Transport document description				
UN NA NA, ENVIRONMENTALLY HAZARDOUS				
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
Not applicable				

14.6. Special precautions for user

Special precautions for user : Not applicable

- Overland transport


No data available

- Transport by sea

No data available

- Air transport

No data available

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- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Code: IBC : Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

COPPER is not on the REACH Candidate List

COPPER is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) nwg, Non-hazardous to water (KBwS-Beschluss; ID No. 1443)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed


15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

1		Modified	
2		Modified	
5		Modified	
15		Modified	
16		Modified	

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Abbreviations and acronyms:

ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods Code
LEL = Lower Explosive Limit/Lower Explosion Limit
UEL = Upper Explosion Limit/Upper Explosive Limit
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
vPvB = very persistent and very bioaccumulating
WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)
TWA = time weighted average
TLV = Threshold limits
STEL = Short term exposure limit
NA = Not applicable
PBT = persistent, bioaccumulating and toxic (PBT).

Sources of key data used to compile the datasheet : European Chemicals Bureau.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment - Aquatic Acute 1
H400	Very toxic to aquatic life.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
 Classification according to Regulation (EC) No. 1272/2008 [CLP]
 Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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