COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 02/06/2020 Revision date: 13/02/2024 Supersedes version of: 02/06/2020 Version: 2.0

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

1.1. Product identifier

Product form	:	Substance
Substance name	:	COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA
Chemical name	:	granulated copper; [particle length: from 0,9 mm to 6,0 mm; particle width: from 0,494 to 0,949 mm]
EC Index-No.	:	029-024-00-X
EC-No.	:	231-159-6
CAS-No.	:	7440-50-8
REACH registration No.	:	02-2119899138-21
Product code	:	R34050
Product group	:	End product
Other means of identification	:	Copper

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

1.2.1. Relevant identified uses

Main use category	:	Professional use
Use of the substance/mixture	:	Laboratory chemicals
Function or use category	:	Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

OEA Labs Ltd
The Generator Quay House The Gallery
Kings Wharf The Quay
EX2 4AN Exeter – Devon
United Kingdom
T +44(0)1579 384174
technical@oealabs.com - oealabs.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS09

Signal word (CLP) : -

Hazard statements (CLP) : H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P264 - Wash hands, forearms and face thoroughly after handling.
P391 - Collect spillage.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name : COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

CAS-No. : 7440-50-8

EC-No. : 231-159-6

EC Index-No. : 029-024-00-X

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
COPPER	CAS-No.: 7440-50-8 EC-No.: 231-159-6 EC Index-No.: 029-024-00-X	100	Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411 (M=10)

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Copper
IOEL TWA	0.01 mg/m³ (respirable fraction)
Remark	(Year of adoption 2014)
Regulatory reference	SCOEL Recommendations
Austria - Occupational Exposure Limits	
Local name	Kupfer und seine Verbindungen
MAK (OEL TWA)	1 mg/m³ (als Cu berechnet, E) 0.1 mg/m³ (als Rauch, als Cu berechnet, A)
MAK (OEL STEL)	4 mg/m³ (als Cu berechnet, E, 4x 15(Miw) min) 0.4 mg/m³ (als Rauch, als Cu berechnet, A, 4x 15(Miw) min)
Regulatory reference	BGBl. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Cuivre (en Cu) # Koper (als Cu)
OEL TWA	0.2 mg/m³ (fumées) # (rook) 1 mg/m³ (poussières et brouillards de) # (stof en nevel)
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Мед
OEL TWA	0.1 mg/m³ (метални пари (като мед)) 1 mg/m³ (оксиди и неорганични съединения (като мед))
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Bakar
GVI (OEL TWA) [1]	0.2 mg/m³ dim (kao Cu) 1 mg/m³ prašina (kao Cu)
KGVI (OEL STEL)	2 mg/m³ prašina (kao Cu)
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Czech Republic - Occupational Exposure Limits	
Local name	Měď
PEL (OEL TWA)	1 mg/m³ (prach) (V) 0.1 mg/m³ (dýmy) (R)
NPK-P (OEL C)	2 mg/m³ (prach) (V) 0.2 mg/m³ (dýmy) (R)
Remark	V - vdechovatelná frakce aerosolu, R - respirabilní frakce aerosolu.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
Denmark - Occupational Exposure Limits	
Local name	Kobber
OEL TWA [1]	1 mg/m³ pulver og støv 0.1 mg/m³ røg, beregnet som Cu
Regulatory reference	BEK nr 202 af 21/02/2023
Estonia - Occupational Exposure Limits	
Local name	Vask ja anorgaanilised ühendid (arvutatud vasele)
OEL TWA	1 mg/m³ kogu tolm 0.2 mg/m³ peentolm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 21.12.2022, 3)
Finland - Occupational Exposure Limits	
Local name	Kupari, metalli
HTP (OEL TWA) [1]	0.02 mg/m³ Cu, alveolijae
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Cuivre
VME (OEL TWA)	0.2 mg/m³ (fumées) 1 mg/m³ (poussières), en Cu
VLE (OEL C/STEL)	2 mg/m³ (poussières), en Cu
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 6443, 2022; Outil65)
Hungary - Occupational Exposure Limits	
Local name	RÉZ és vegyületei (Cu-re számítva)
AK (OEL TWA)	0.1 mg/m³ 0.01 mg/m³ füst, respirábilis frakció
CK (OEL STEL)	0.2 mg/m³
Remark	R (Azok az anyagok, amelyek egészségkárosító hatása RÖVID expozíció hatására jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Copper (as Cu)
OEL TWA [1]	0.2 mg/m³ Fume 1 mg/m³ Dusts and mists
Regulatory reference	Chemical Agents Code of Practice 2021
Latvia - Occupational Exposure Limits	
Local name	Varš
OEL TWA	0.5 mg/m³

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
OEL STEL	1 mg/m³
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Netherlands - Occupational Exposure Limits	
Local name	Koper
TGG-8u (OEL TWA)	0.1 mg/m³ en anorganische koperverbindingen (inhaleerbaar)
Regulatory reference	Arbeidsomstandighedenregeling 2023
Poland - Occupational Exposure Limits	
Local name	Miedź i jej związki nieorganiczne
NDS (OEL TWA)	0.2 mg/m³ w przeliczeniu na Cu
Regulatory reference	Dz. U. 2018 poz. 1286 wraz z późn. zm.
Portugal - Occupational Exposure Limits	
Local name	Cobre
OEL TWA	0.2 mg/m³ Fumos, expressos em Cu 1 mg/m³ Poeiras e névoas, expressos em Cu
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Cupru
OEL TWA	0.5 mg/m³ (Pulberi)
OEL STEL	0.2 mg/m³ (Fumuri) 1.5 mg/m³ (Pulberi)
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovakia - Occupational Exposure Limits	
Local name	Meď a jej anorganické zlúčeniny (ako Cu)
NPHV (OEL TWA) [1]	1 mg/m³ inhalovateľná frakcia 0.2 mg/m³ respirabilná frakcia a dymy
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Spain - Occupational Exposure Limits	
Local name	Cobre
VLA-ED (OEL TWA) [1]	0.01 mg/m³ Fracción respirable
Remark	d (Véase UNE EN 481: Atmósferas en los puestos de trabajo. Definición de las fracciones por el tamaño de las partículas para la medición de aerosoles).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2023. INSHT
Sweden - Occupational Exposure Limits	
Local name	Koppar, och oorg. Föreningar (som Cu)
NGV (OEL TWA)	0.01 mg/m³ respirabel fraktion
Remark	3 (Den respirabla fraktionen är de inhalerbara partiklar som når längst ner i luftvägarna, till alveolerna i lungorna)

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Copper
WEL TWA (OEL TWA) [1]	0.2 mg/m³ fume (as Cu) 1 mg/m³ and compounds, dusts and mists (as Cu)
WEL STEL (OEL STEL)	2 mg/m³ and compounds, dusts and mists (as Cu)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Kopar
OEL TWA	1 mg/m³ duft og ryk, (heildarryk) 0.1 mg/m³ reykur, sem Cu, (örfínt ryk)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Kobber
Grenseverdi (OEL TWA) [1]	0.1 mg/m³ Røyk 1 mg/m³ Støv
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Cuivre et ses composés inorganiques / Kupfer und seine anorganischen Verbindungen
MAK (OEL TWA) [1]	0.1 mg/m³ (i) / (e)
KZGW (OEL STEL)	0.2 mg/m³ (i) / (e)
Critical toxicity	Poumons, Fimétal / Lunge, Metallrauch
Notation	SS_C / SS_C
Remark	NIOSH
Regulatory reference	www.suva.ch, 01.01.2023
USA - ACGIH - Occupational Exposure Limits	
Local name	Copper, as Cu
ACGIH OEL TWA	0.2 mg/m³ (Fume) 1 mg/m³ (Dusts and mists)
Remark (ACGIH)	TLV® Basis: Irr; GI; metal fume fever
Regulatory reference	ACGIH 2024

COPPER (7440-50-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Copper
IOEL TWA	0.01 mg/m³ (respirable fraction)
Remark	(Year of adoption 2014)

COPPER (7440-50-8)	
Regulatory reference	SCOEL Recommendations
Austria - Occupational Exposure Limits	
Local name	Kupfer und seine Verbindungen
MAK (OEL TWA)	1 mg/m³ (als Cu berechnet, E) 0.1 mg/m³ (als Rauch, als Cu berechnet, A)
MAK (OEL STEL)	4 mg/m³ (als Cu berechnet, E, 4x 15(Miw) min) 0.4 mg/m³ (als Rauch, als Cu berechnet, A, 4x 15(Miw) min)
Regulatory reference	BGBl. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Cuivre (en Cu) # Koper (als Cu)
OEL TWA	0.2 mg/m³ (fumées) # (rook) 1 mg/m³ (poussières et brouillards de) # (stof en nevel)
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Мед
OEL TWA	0.1 mg/m³ (метални пари (като мед)) 1 mg/m³ (оксиди и неорганични съединения (като мед))
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Bakar
GVI (OEL TWA) [1]	0.2 mg/m³ dim (kao Cu) 1 mg/m³ prašina (kao Cu)
KGVI (OEL STEL)	2 mg/m³ prašina (kao Cu)
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Czech Republic - Occupational Exposure Limits	
Local name	Měď
PEL (OEL TWA)	1 mg/m³ (prach) (V) 0.1 mg/m³ (dýmy) (R)
NPK-P (OEL C)	2 mg/m³ (prach) (V) 0.2 mg/m³ (dýmy) (R)
Remark	V - vdechovatelná frakce aerosolu, R - respirabilní frakce aerosolu.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Kobber
OEL TWA [1]	1 mg/m³ pulver og støv 0.1 mg/m³ røg, beregnet som Cu

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

COPPER (7440-50-8)	
Regulatory reference	BEK nr 1054 af 28/06/2022
Estonia - Occupational Exposure Limits	
Local name	Vask ja anorgaanilised ühendid (arvutatud vasele)
OEL TWA	1 mg/m³ kogu tolm 0.2 mg/m³ peentolm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Kupari, metalli
HTP (OEL TWA) [1]	0.02 mg/m³ Cu, alveolijae
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Cuivre
VME (OEL TWA)	0.2 mg/m³ (fumées) 1 mg/m³ (poussières), en Cu
VLE (OEL C/STEL)	2 mg/m³ (poussières), en Cu
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Hungary - Occupational Exposure Limits	
Local name	RÉZ és vegyületei (Cu-re számítva)
AK (OEL TWA)	0.1 mg/m³ 0.01 mg/m³ füst, respirábilis frakció
CK (OEL STEL)	0.2 mg/m³
Remark	R (Azok az anyagok, amelyek egészségkárosító hatása RÖVID expozíció hatására jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Copper (as Cu)
OEL TWA [1]	0.2 mg/m³ Fume 1 mg/m³ Dusts and mists
Regulatory reference	Chemical Agents Code of Practice 2021
Latvia - Occupational Exposure Limits	
Local name	Varš
OEL TWA	0.5 mg/m³
OEL STEL	1 mg/m³
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325

COPPER (7440-50-8)	
Netherlands - Occupational Exposure Limits	
Local name	Koper
TGG-8u (OEL TWA)	0.1 mg/m³ en anorganische koperverbindingen (inhaleerbaar)
Regulatory reference	Arbeidsomstandighedenregeling 2023
Poland - Occupational Exposure Limits	
Local name	Miedź i jej związki nieorganiczne
NDS (OEL TWA)	0.2 mg/m³ w przeliczeniu na Cu
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Cobre
OEL TWA	0.2 mg/m³ Fumos, expressos em Cu 1 mg/m³ Poeiras e névoas, expressos em Cu
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Cupru
OEL TWA	0.5 mg/m³ (Pulberi)
OEL STEL	0.2 mg/m³ (Fumuri) 1.5 mg/m³ (Pulberi)
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovakia - Occupational Exposure Limits	
Local name	Meď a jej anorganické zlúčeniny (ako Cu)
NPHV (OEL TWA) [1]	1 mg/m³ inhalovateľná frakcia 0.2 mg/m³ respirabilná frakcia a dymy
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Spain - Occupational Exposure Limits	
Local name	Cobre
VLA-ED (OEL TWA) [1]	0.01 mg/m³ Fracción respirable
Remark	d (Véase UNE EN 481: Atmósferas en los puestos de trabajo. Definición de las fracciones por el tamaño de las partículas para la medición de aerosoles).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2023. INSHT
Sweden - Occupational Exposure Limits	
Local name	Koppar, och oorg. Föreningar (som Cu)
NGV (OEL TWA)	0.01 mg/m³ respirabel fraktion
Remark	3 (Den respirabla fraktionen är de inhalerbara partiklar som når längst ner i luftvägarna, till alveolerna i lungorna)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)

COPPER (7440-50-8)	
United Kingdom - Occupational Exposure Limits	
Local name	Copper
WEL TWA (OEL TWA) [1]	0.2 mg/m³ fume (as Cu) 1 mg/m³ and compounds, dusts and mists (as Cu)
WEL STEL (OEL STEL)	2 mg/m³ and compounds, dusts and mists (as Cu)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Kopar
OEL TWA	1 mg/m³ duft og ryk, (heildarryk) 0.1 mg/m³ reykur, sem Cu, (örfínt ryk)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Kobber
Grenseverdi (OEL TWA) [1]	0.1 mg/m³ Røyk 1 mg/m³ Støv
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Cuivre et ses composés inorganiques / Kupfer und seine anorganischen Verbindungen
MAK (OEL TWA) [1]	0.1 mg/m³ (i) / (e)
KZGW (OEL STEL)	0.2 mg/m³ (i) / (e)
Critical toxicity	Poumons, Fimétal / Lunge, Metallrauch
Notation	SS_C / SS_C
Remark	NIOSH
Regulatory reference	www.suva.ch, 01.01.2023

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	273 mg/kg bodyweight/day
Acute - local effects, inhalation	1 mg/m³
Long-term - systemic effects, dermal	137 mg/kg bodyweight/day
Long-term - local effects, inhalation	1 mg/m³

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	273 mg/kg bodyweight/day
Acute - local effects, inhalation	1 mg/m³
Long-term - systemic effects,oral	0.041 mg/kg bodyweight/day
Long-term - systemic effects, dermal	137 mg/kg bodyweight/day
Long-term - local effects, inhalation	1 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	7.8 µg/l
PNEC aqua (marine water)	5.2 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	87 mg/kg dwt
PNEC sediment (marine water)	676 mg/kg dwt
PNEC (Soil)	
PNEC soil	65 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	230 µg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Orange.
Molecular mass	:	63.546 g/mol Source: HSDB
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	> 600 °C Atm. press.: 1 Bar Decomposition: 'yes' Decomp. temp.: 230 °C
Freezing point	:	Not applicable
Boiling point	:	2595 °C Source: HSDB
Flammability	:	Non flammable.
Explosive limits	:	Not applicable
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	> 1059 °C Source: ECHA
Decomposition temperature	:	Not available
pH	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Water: < 1 mg/l at 30°C Source: ECHA
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	-0.57 Source: EPISUITE
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	8.94 Source: HSDB
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
LD50 oral rat	300 – 500 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity), Guideline: other:
LC50 Inhalation - Rat	> 5.11 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

Not rapidly degradable

COPPER (7440-50-8)	
LC50 - Fish [1]	0.15 mg/l
EC50 - Other aquatic organisms [1]	0.04 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA (7440-50-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.57 Source: EPISUITE

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

HP Code : HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3077	UN 3077	UN 3077	UN 3077	UN 3077
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER)	Environmentally hazardous substance, solid, n.o.s. (COPPER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER)

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

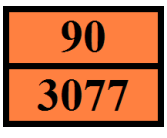
Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
Transport document description				
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER), 9, III, MARINE POLLUTANT	UN 3077 Environmentally hazardous substance, solid, n.o.s. (COPPER), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
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
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	M7
Special provisions (ADR)	:	274, 335, 375, 601
Limited quantities (ADR)	:	5kg
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P002, IBC08, LP02, R001
Special packing provisions (ADR)	:	PP12, B3
Mixed packing provisions (ADR)	:	MP10
Portable tank and bulk container instructions (ADR)	:	T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (ADR)	:	TP33
Tank code (ADR)	:	SGAV, LGBV
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V13
Special provisions for carriage - Bulk (ADR)	:	VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13
Hazard identification number (Kemler No.)	:	90
Orange plates	:	
Tunnel restriction code (ADR)	:	-
EAC code	:	2Z

Transport by sea

Special provisions (IMDG)	:	274, 335, 966, 967, 969
Limited quantities (IMDG)	:	5 kg
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	LP02, P002
Special packing provisions (IMDG)	:	PP12
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B3
Tank instructions (IMDG)	:	BK1, BK2, BK3, T1
Tank special provisions (IMDG)	:	TP33
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-F
Stowage category (IMDG)	:	A
Stowage and handling (IMDG)	:	SW23

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y956
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	956
PCA max net quantity (IATA)	:	400kg
CAO packing instructions (IATA)	:	956
CAO max net quantity (IATA)	:	400kg
Special provisions (IATA)	:	A97, A158, A179, A197, A215
ERG code (IATA)	:	9L

Inland waterway transport

Classification code (ADN)	:	M7
Special provisions (ADN)	:	274, 335, 375, 601
Limited quantities (ADN)	:	5 kg
Excepted quantities (ADN)	:	E1
Carriage permitted (ADN)	:	T* B**
Equipment required (ADN)	:	PP, A***
Number of blue cones/lights (ADN)	:	0
Additional requirements/Remarks (ADN)	:	* Only in the molten state. ** For carriage in bulk see also 7.1.4.1. *** Only in the case of transport in bulk.

Rail transport

Classification code (RID)	:	M7
Special provisions (RID)	:	274, 335, 375, 601
Limited quantities (RID)	:	5kg
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P002, IBC08, LP02, R001
Special packing provisions (RID)	:	PP12, B3
Mixed packing provisions (RID)	:	MP10
Portable tank and bulk container instructions (RID)	:	T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (RID)	:	TP33
Tank codes for RID tanks (RID)	:	SGAV, LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W13
Special provisions for carriage – Bulk (RID)	:	VC1, VC2
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW31
Colis express (express parcels) (RID)	:	CE11
Hazard identification number (RID)	:	90

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 9697).

Storage class (LGK, TRGS 510) : LGK 13 - Non-combustible solids.

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 6.2, LGK 7.

Joint storage with restrictions permitted for : LGK 4.1A, LGK 5.1C.

Joint storage permitted for : LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13.

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category	:	A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

Switzerland

Storage class (LK)	:	LK 11/13 - Solids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit

COPPER REDUCTION REAGENT, HIGH PURITY WIRES, 0.65 X 6MM, OEA

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Abbreviations and acronyms:	
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

The classification complies with : ATP 12

Safety Data Sheet (SDS)_OEA, EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.