

Lead Free Solder Wire

Safety Data Sheet

According to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Date of issue: 5/2/2016 Revision date: 12/17/2021 Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Lead Free Solder Wire
UFI : Not applicable

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

1.2.1. Relevant identified uses

Soldering

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier: Kopen Electrical Co., Ltd.

Address: 2/F., Flat G-H Winner Factory Building, 55 Hung To Road, Kwun Tong, Kowloon, Hong Kong.

Phone: 852-2342 4281

Fax: 852-2343 2850

Email: info@kopen.com

1.4. Emergency telephone number

+852-2342 4281

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Full text of H statements : see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements (CLP) :

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P337 + P313 If eye irritation persists: Get medical advice/attention

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container to hazardous or special waste collection point in accordance with local/regional/national/international regulations.

EUH-statements :

None.

2.3. Other hazards

Other hazards which do not result in classification : No information available.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tin (Sn)	(CAS-No.) 7440-31-5 (EC-No.) 231- 141-8	97.761	Eye Irrit. 2; STOT SE 3; H319, H335
Copper (Cu)	(CAS-No.) 7440-50-8 (EC-No.) 231- 159-6	0.739	Not classified
Modified rosin	---	1.5	H317, H334

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove contaminated clothing and shoes. If symptoms persist, call a physician.
First-aid measures after inhalation	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Wash off with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Get medical advice/attention.

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

Symptoms/effects : Causes serious eye irritation. May cause respiratory irritation.

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	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	: No information available

5.2. Special hazards arising from the substance or mixture

Tin/tin oxides

5.3. Advice for firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas
Ensure adequate ventilation, especially in confined areas
Remove all sources of ignition
Avoid contact with skin, eyes and inhalation of vapors
Use personal protection recommended in Section 8

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so
Do not allow into any sewer, on the ground or into any body of water

6.3. Methods and material for containment and cleaning up

Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. 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.

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Air and moisture sensitive. Handle and store under inert gas.

Storage class (TRGS 510): Non Combustible Solids

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (7440-50-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Copper
IOEL TWA	0.01 mg/m ³ (respirable fraction)
Remark	(Year of adoption 2014)
Regulatory reference	SCOEL Recommendations
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	1 mg/m ³ (inhalable fraction) 0.1 mg/m ³ (respirable fraction, smoke)
MAK (OEL STEL)	4 mg/m ³ (inhalable fraction) 0.4 mg/m ³ (respirable fraction, smoke)
Belgium - Occupational Exposure Limits	
OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Bulgaria - Occupational Exposure Limits	
OEL TWA	0.1 mg/m ³ (metal vapor)
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	0.2 mg/m ³ (fume) 1 mg/m ³ (dust)
KGVI (OEL STEL)	2 mg/m ³ (fume and dust)
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	1 mg/m ³ (dust) 0.1 mg/m ³ (fume)
Denmark - Occupational Exposure Limits	
OEL TWA [1]	1 mg/m ³ (dust and powder) 0.1 mg/m ³ (fume)
Estonia - Occupational Exposure Limits	
OEL TWA	1 mg/m ³ (total dust) 0.2 mg/m ³ (respirable dust)
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	0.02 mg/m ³ (respirable dust)
France - Occupational Exposure Limits	
VME (OEL TWA)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust)
VLE (OEL C/STEL)	2 mg/m ³ (dust)
Greece - Occupational Exposure Limits	
OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust)

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Copper (7440-50-8)	
OEL STEL	2 mg/m ³ (dust)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	1 mg/m ³ 0.1 mg/m ³ (fume)
CK (OEL STEL)	4 mg/m ³ 0.4 mg/m ³ (fume)
Ireland - Occupational Exposure Limits	
OEL TWA [1]	0.2 mg/m ³ (fume) 1 mg/m ³ (dusts and mists)
OEL STEL	2 mg/m ³ (dusts and mists) 0.6 mg/m ³ (calculated-fume)
Latvia - Occupational Exposure Limits	
OEL TWA	0.5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	1 mg/m ³ (inhalable fraction) 0.2 mg/m ³ (respirable fraction)
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	0.1 mg/m ³ (inhalable fraction)
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	0.2 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Romania - Occupational Exposure Limits	
OEL TWA	0.5 mg/m ³ (powder)
OEL STEL	0.2 mg/m ³ (fume) 1.5 mg/m ³ (dust)
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	1 mg/m ³ (inhalable fraction) 0.2 mg/m ³ (respirable fraction)
Slovenia - Occupational Exposure Limits	
OEL TWA	1 mg/m ³ (inhalable fraction) 0.1 mg/m ³ (respirable fraction, fume)
OEL STEL	4 mg/m ³ (inhalable fraction) 0.4 mg/m ³ (respirable fraction, fume)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	0.01 mg/m ³ (respirable dust)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	1 mg/m ³ (dust and mists) 0.2 mg/m ³ (fume)
WEL STEL (OEL STEL)	0.6 mg/m ³ (calculated-fume) 2 mg/m ³ (dust and mist)
Norway - Occupational Exposure Limits	
Grønseverdi (OEL TWA) [1]	0.1 mg/m ³ (fume) 1 mg/m ³ (dust)
Korttidsverdi (OEL STEL)	0.3 mg/m ³ (value calculated-fume) 2 mg/m ³ (value calculated-dust)

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Copper (7440-50-8)

Switzerland - Occupational Exposure Limits

MAK (OEL TWA) [1]	0.1 mg/m ³ (inhalable dust)
KZGW (OEL STEL)	0.2 mg/m ³ (inhalable dust)

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA	0.2 mg/m ³ (fume)
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8.2. Exposure controls

Appropriate engineering controls:

Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Hand protection:

Protective gloves

Eye protection:

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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	: Silvery
Odour	: Odourless
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: No data available
Solubility	: Insoluble in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not an explosive
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Heat of ignition.

10.5. Incompatible materials

Strong oxidizing agents, Chlorine, permanganates, e.g. potassium permanganate.

10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), Titanium/titanium oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

Other information : No information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated				
14.2. UN proper shipping name				
Not regulated				
Transport document description				
Not regulated				
14.3. Transport hazard class(es)				
Not regulated				
14.4. Packing group				
Not regulated				
14.5. Environmental hazards				
Not regulated				
No supplementary information available				

14.6. Special precautions for user

Not regulated

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Indication of changes:

Issue Date	5/2/2016
Revision date	12/17/201
Revision Note	Regulatory 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
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Data sources : ECHA: <http://echa.europa.eu/>
IFA GESTIS: [http://gestis-en.itrust.de/nxt/gateway.dll?f=templates\\$fn=default.htm\\$vid=gestiseng:sdbeng](http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng)
HSDB: <http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
ICSC: <http://www.ilo.org/dyn/icsc/showcard.home>
eChemPortal: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
NITE-CHRIP: http://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H- and EUH-statements:

Flam. Liq. 2	Flammable liquids, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H319	Causes serious eye irritation.

SDS EU (REACH Annex II)

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.