



Material Safety Data Sheet

1. Product & Company Identification

Product:	Lead free solder wire
Manufacturer:	Conrad Electronic SE
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
Date of issue:	31.01.2019

1.1. Product identifier

Product Name: Lead Free Solder Wire

REACH registration No.: Not applicable

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

Recommended Use: Soldering

Uses advised against: No information available

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

2.2. Label elements

Symbols/Pictograms:



Signal word: Warning

Hazard Statements: H319 Causes serious eye irritation.

H335 May cause respiratory irritation

Precautionary Statements: P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



Material Safety Data Sheet

3. Composition/information on ingredients

3.1. Mixture

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tin (Sn)	231-141-8	7440-31-5	97.761	Eye Irrit. 2; STOT SE 3; H319, H335
Copper (Cu)	231-159-6	7440-50-8	0.739	Not classified
Modified rosin	-	65997-13-9	1.5	H317, H334

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1. Description of first aid measures

General advice

Remove contaminated clothing and shoes. If symptoms persist, call a physician.

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.

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.

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.

Ingestion

Rinse mouth. Do not induce vomiting. Get medical advice/attention.



Material Safety Data Sheet

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.

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

See Section 7 for more information

See section 8 for more information

See section 13 for more information



Material Safety Data Sheet

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)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

8. Exposure controls/personal protection

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace:

Chemical Name: Copper (CAS #: 7440-50-8)

Australia: 1 mg/m³

0.2 mg/m³

Austria: STEL 4 mg/m³

STEL 0.4 mg/m³

TWA: 1 mg/m³

TWA: 0.1 mg/m³

Denmark: TWA: 1.0 mg/m³

TWA: 0.1 mg/m³

ACGIH TLV: TWA: 0.2 mg/m³ fume

TWA: 1 mg/m³ Cu dust and mist

NIOSH IDLH: IDLH: 100 mg/m³ dust, fume and mist

IDLH: 100 mg/m³ Cu dust and mist

TWA: 1 mg/m³ dust and mist

TWA: 0.1 mg/m³ fume

TWA: 1 mg/m³ Cu dust and mist



Material Safety Data Sheet

8.2. Exposure controls

Engineering Controls

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

Personal protective equipment

Eye/face 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 protection:

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

Body protection:

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.3. Environmental exposure controls

Do not let product enter drains.



Material Safety Data Sheet

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Solid
Color	Silvery
Odor	Odourless
Odor Threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability	Not flammable
Flammability Limit in Air	No information available
Vapor Pressure	No information available
Vapor density	No information available
Density	No information available
Relative density	No information available
Bulk density	No information available
Specific gravity	No information available
Water solubility	Insoluble in water

Partition coefficient

Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	Not an explosive
Oxidizing properties	No information available

9.2. Other information

No information available



Material Safety Data Sheet

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

Strong heating.

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

Other incomplete combustion products

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50
Copper (CAS #: 7440-50-8)	> 2500 mg/kg bw(rat)	> 2000 mg/kg bw(rat)	= 1.03 mg/L/4 h(rat)

Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available.
Sensitization:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.
STOT-single exposure:	No data available.
STOT-repeated exposure:	No data available.
Aspiration hazard:	No data available.



Material Safety Data Sheet

12. Ecological information

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

14. Transport information

14.1. UN Number

Not regulated

14.2. Proper shipping name

Not regulated

14.3. Hazard Class

Not regulated

14.4. Packing Group

Not regulated

14.5. Environmental hazards

Not marine pollutant

14.6. Special precautions

No information available



Material Safety Data Sheet

15. Regulatory information

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

International Inventories

No information available

15.2. Chemical safety assessment

No information available

16. Other information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value
TSCA	United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL	Canadian Domestic Substances List/Non Domestic Substances List
EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	Japan Existing and New Chemical Substances
IECSC	China Inventory of Existing Chemical Substances
KECL	Korean Existing and Evaluated Chemical Substances
PICCS	Philippines Inventory of Chemicals and Chemical Substances
AICS	Australian Inventory of Chemical Substances

Full text of H-Statements referred to under section 3

- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H317 May cause an allergic skin reaction.
- H334 May cause an allergic if inhaled

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.