

# Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH)



## Copper Foil

article number: **8540**  
Version: **5.0 en**  
Replaces version of: 05.04.2023  
Version: (4)

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

### 1.1 Product identifier

|                                 |                                                                                                |
|---------------------------------|------------------------------------------------------------------------------------------------|
| Identification of the substance | <b>Copper Foil</b>                                                                             |
| Article number                  | 8540                                                                                           |
| Registration number (REACH)     | The substance does not require registration according to Regulation (EC) No 1907/2006 [REACH]. |
| EC number                       | 231-159-6                                                                                      |
| CAS number                      | 7440-50-8                                                                                      |

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

|                           |                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------|
| Relevant identified uses: | Laboratory chemical<br>Laboratory and analytical use                                  |
| Uses advised against:     | Do not use for private purposes (household).<br>Food, drink and animal feedingstuffs. |

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0

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**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008 (CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

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### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |             |
|-------------------|-------------|
| Name of substance | Copper      |
| Molecular formula | Cu          |
| Molar mass        | 63,54 g/mol |
| CAS No            | 7440-50-8   |
| EC No             | 231-159-6   |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

No special measures are necessary.

#### Following inhalation

There is no major dust generation possible.

#### Following skin contact

Brush off loose particles from skin.

#### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Symptoms and effects are not known to date.

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

none

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!  
water, foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Non-combustible.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

No special measures are necessary.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

No special measures are necessary.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in a dry place.

**Incompatible substances or mixtures**

Observe hints for combined storage.

**Consideration of other advice:**

**Specific designs for storage rooms or vessels**

Recommended storage temperature: 15 – 25 °C

**7.3 Specific end use(s)**

No information available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**National limit values**

**Occupational exposure limit values (Workplace Exposure Limits)**

This information is not available.

**Human health values**

| Relevant DNELs and other threshold levels |                  |                                    |                   |                            |
|-------------------------------------------|------------------|------------------------------------|-------------------|----------------------------|
| Endpoint                                  | Threshold level  | Protection goal, route of exposure | Used in           | Exposure time              |
| DNEL                                      | 137 mg/kg bw/day | human, dermal                      | worker (industry) | chronic - systemic effects |
| DNEL                                      | 273 mg/kg bw/day | human, dermal                      | worker (industry) | acute - systemic effects   |

**Environmental values**

| Relevant PNECs and other threshold levels |                 |                   |                              |                              |
|-------------------------------------------|-----------------|-------------------|------------------------------|------------------------------|
| End-point                                 | Threshold level | Organism          | Environmental compartment    | Exposure time                |
| PNEC                                      | 7,8 µg/l        | aquatic organisms | freshwater                   | short-term (single instance) |
| PNEC                                      | 5,2 µg/l        | aquatic organisms | marine water                 | short-term (single instance) |
| PNEC                                      | 230 µg/l        | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| PNEC                                      | 87 mg/kg        | aquatic organisms | freshwater sediment          | short-term (single instance) |
| PNEC                                      | 676 mg/kg       | aquatic organisms | marine sediment              | short-term (single instance) |

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| Relevant PNECs and other threshold levels |                 |                       |                           |                              |
|-------------------------------------------|-----------------|-----------------------|---------------------------|------------------------------|
| End-point                                 | Threshold level | Organism              | Environmental compartment | Exposure time                |
| PNEC                                      | 65 mg/kg        | terrestrial organisms | soil                      | short-term (single instance) |

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggle with side protection.

##### Skin protection



##### • hand protection

Hand protection is not required.

##### Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White). Usually no personal respirative protection necessary.

##### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                          |                             |
|----------------------------------------------------------|-----------------------------|
| Physical state                                           | solid                       |
| Form                                                     | acc. to product description |
| Colour                                                   | copper                      |
| Odour                                                    | odourless                   |
| Melting point/freezing point                             | 1.059 °C (ECHA)             |
| Boiling point or initial boiling point and boiling range | 2.580 °C at 1.013 hPa       |
| Flammability                                             | non-combustible             |
| Lower and upper explosion limit                          | not determined              |

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|                                                     |                                                             |
|-----------------------------------------------------|-------------------------------------------------------------|
| Flash point                                         | not applicable                                              |
| Auto-ignition temperature                           | not determined                                              |
| Decomposition temperature                           | not relevant                                                |
| pH (value)                                          | not applicable                                              |
| Kinematic viscosity                                 | not relevant                                                |
| <u>Solubility(ies)</u>                              |                                                             |
| Water solubility                                    | not determined                                              |
| <u>Partition coefficient</u>                        |                                                             |
| Partition coefficient n-octanol/water (log value):  | not relevant (inorganic)                                    |
| Vapour pressure                                     | not determined                                              |
| <u>Density and/or relative density</u>              |                                                             |
| Density                                             | 8,78 g/cm <sup>3</sup> at 20 °C (ECHA)                      |
| Relative vapour density                             | Information on this property is not available.              |
| Particle characteristics                            | No data available.                                          |
| <u>Other safety parameters</u>                      |                                                             |
| Oxidising properties                                | none                                                        |
| <b>9.2 Other information</b>                        |                                                             |
| Information with regard to physical hazard classes: | hazard classes acc. to GHS (physical hazards): not relevant |
| Other safety characteristics:                       | There is no additional information.                         |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

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### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

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

#### Classification according to GHS (1272/2008/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

#### Acute toxicity

Shall not be classified as acutely toxic.

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

#### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

#### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

#### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

##### • If swallowed

Liver and kidney damage, gastrointestinal complaints

##### • If in eyes

Data are not available.

##### • If inhaled

Data are not available.

##### • If on skin

Data are not available.

##### • Other information

none

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### 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Recycling/reclamation of metals and metal compounds.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.



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**SECTION 14: Transport information**

- 14.1 UN number or ID number not subject to transport regulations
- 14.2 UN proper shipping name not assigned
- 14.3 Transport hazard class(es) none
- 14.4 Packing group not assigned
- 14.5 Environmental hazards non-environmentally hazardous acc. to the dangerous goods regulations
- 14.6 Special precautions for user  
There is no additional information.
- 14.7 Maritime transport in bulk according to IMO instruments  
The cargo is not intended to be carried in bulk.
- 14.8 Information for each of the UN Model Regulations
  - International Maritime Dangerous Goods Code (IMDG) - Additional information  
Not subject to IMDG.
  - International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information  
Not subject to ICAO-IATA.

**SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Relevant provisions of the European Union (EU)
  - Restrictions according to REACH, Annex XVII  
not listed
  - List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list  
Not listed.
  - Seveso Directive

| 2012/18/EU (Seveso III) |                                       |                                                                                       |       |
|-------------------------|---------------------------------------|---------------------------------------------------------------------------------------|-------|
| No                      | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
|                         | not assigned                          |                                                                                       |       |

**Deco-Paint Directive**

|             |       |
|-------------|-------|
| VOC content | 0 %   |
| VOC content | 0 g/l |

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### Industrial Emissions Directive (IED)

|             |       |
|-------------|-------|
| VOC content | 0 %   |
| VOC content | 0 g/l |

### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

| Pollutant release and transfer registers (PRTR) |           |         |                                         |
|-------------------------------------------------|-----------|---------|-----------------------------------------|
| Name of substance                               | CAS No    | Remarks | Threshold for releases to air (kg/year) |
| Copper                                          | 7440-50-8 | (8)     | 100                                     |

#### Legend

(8) All metals shall be reported as the total mass of the element in all chemical forms present in the release

### Water Framework Directive (WFD)

| List of pollutants (WFD) |                            |        |           |         |
|--------------------------|----------------------------|--------|-----------|---------|
| Name of substance        | Name acc. to inventory     | CAS No | Listed in | Remarks |
| Copper                   | Metals and their compounds |        | a)        |         |

#### Legend

a) Indicative list of the main pollutants

### Regulation on the marketing and use of explosives precursors

not listed

### Regulation on drug precursors

not listed

### Regulation on substances that deplete the ozone layer (ODS)

not listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

### Regulation on persistent organic pollutants (POP)

not listed

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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### National inventories

| Country | Inventory  | Status                       |
|---------|------------|------------------------------|
| AU      | AIIC       | substance is listed          |
| CA      | DSL        | substance is listed          |
| CN      | IECSC      | substance is listed          |
| EU      | ECSI       | substance is listed          |
| EU      | REACH Reg. | substance is listed          |
| KR      | KECI       | substance is listed          |
| MX      | INSQ       | substance is listed          |
| NZ      | NZIoC      | substance is listed          |
| PH      | PICCS      | substance is listed          |
| TR      | CICR       | substance is listed          |
| TW      | TCSI       | substance is listed          |
| US      | TSCA       | substance is listed (ACTIVE) |
| VN      | NCI        | substance is listed          |

#### Legend

|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| DSL        | Domestic Substances List (DSL)                                          |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NCI        | National Chemical Inventory                                             |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances                                             |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act                                             |

### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value)                                                                                              | Actual entry (text/value)                                                                                             | Safety-relevant |
|---------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------|
| 2.3     | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$ . | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ . | yes             |
| 15.1    |                                                                                                                        | National inventories:<br>change in the listing (table)                                                                | yes             |

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### Abbreviations and acronyms

| Abbr.    | Descriptions of used abbreviations                                                                                                                                                |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADR      | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)                     |
| CAS      | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)                                                                            |
| CLP      | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures                                                                                |
| DGR      | Dangerous Goods Regulations (see IATA/DGR)                                                                                                                                        |
| DNEL     | Derived No-Effect Level                                                                                                                                                           |
| EC No    | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) |
| ED       | Endocrine disruptor                                                                                                                                                               |
| EINECS   | European Inventory of Existing Commercial Chemical Substances                                                                                                                     |
| ELINCS   | European List of Notified Chemical Substances                                                                                                                                     |
| GHS      | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations                                                                         |
| IATA     | International Air Transport Association                                                                                                                                           |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)                                                                                                                    |
| ICAO     | International Civil Aviation Organization                                                                                                                                         |
| IMDG     | International Maritime Dangerous Goods Code                                                                                                                                       |
| NLP      | No-Longer Polymer                                                                                                                                                                 |
| PBT      | Persistent, Bioaccumulative and Toxic                                                                                                                                             |
| PNEC     | Predicted No-Effect Concentration                                                                                                                                                 |
| REACH    | Registration, Evaluation, Authorisation and Restriction of Chemicals                                                                                                              |
| SVHC     | Substance of Very High Concern                                                                                                                                                    |
| VOC      | Volatile Organic Compounds                                                                                                                                                        |
| vPvB     | Very Persistent and very Bioaccumulative                                                                                                                                          |

### Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.