

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

FINOTIN Tin foil

REF 30011/ 30012/ 30013/ 30014/ 30015/ 30016

**Further trade names**

TIN &lt; 0,01% Pb; Tin foil

Product group: Metalle  
CAS No: 7440-31-5  
EC No: 231-141-8

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

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet**

Company name: FINO GmbH  
Street: Mangelsfeld 18  
Place: D-97708 Bad Bocklet  
Telephone: +49-97 08-90 94 20  
e-mail: info@fino.com  
Contact person: Joachim Mahlmeister  
e-mail: info@fino.com  
Responsible Department: This number can only be reached during our office hours, Monday to Friday from 8 a.m. to 5 p.m.

Telefax: +49-97 08-90 94 21

Internet: www.fino.com

Telephone: +49-97 08-90 94 20

**1.4. Emergency telephone****number:**

+49-89-1 92 40  
POISON CENTER München  
24 hour(s) 7 day(s)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

The classification of the product was calculated using the following method in accordance with Article 9 and the criteria of Regulation (EC) No. 1272/2008.

Physical hazards: Review of test data acc. Annex I, Part 2

Compact metal/alloy without hazards for human health or environment: Calculation method in accordance with Annex I, Part 3, 4 and 5.

**2.2. Label elements****GB CLP Regulation****Special labelling of certain mixtures**

Restricted to professional users.

**Additional advice on labelling**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

**2.3. Other hazards**

There is no requirement for the product to be specially labelled according to EC directives or the corresponding national laws. Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH) The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

**Hazardous components**

| CAS No    | Chemical name  |              |          | Quantity    |
|-----------|--|--------------|----------|-------------|
|           | EC No  | Index No     | REACH No |             |
|           | Classification (GB CLP Regulation)                               |              |          |             |
| 7440-31-5 | Tin, Powder  |              |          | 90-100 %    |
|           | 231-141-8  |              |          |             |
| 7440-50-8 | Copper   |              |          | 3,00 %      |
|           | 231-159-6  |              |          |             |
|           | Flam. Sol. 1, Aquatic Acute 1, Aquatic Chronic 1; H228 H400 H410 |              |          |             |
| 7440-22-4 | Silver, powder   |              |          | 0,00-6,00 % |
|           | 231-131-3  |              |          |             |
|           | Aquatic Acute 1, Aquatic Chronic 1; H400 H410                    |              |          |             |
| 7440-36-0 | Antimony   |              |          | 0,00-5,00 % |
|           | 231-146-5  |              |          |             |
|           | Carc. 2, STOT SE 3; H351 H335                                    |              |          |             |
| 7439-92-1 | lead massive [particle diameter >= 1 mm]                         |              |          | < 0,01 %    |
|           | 231-100-4  | 082-014-00-7 |          |             |
|           | Repr. 1A, Lact.; H360FD H362                                     |              |          |             |

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

**Specific Conc. Limits, M-factors and ATE**

| CAS No    | EC No                                    | Chemical name | Quantity    |
|-----------|--|---------------|-------------|
|           | Specific Conc. Limits, M-factors and ATE |               |             |
| 7440-36-0 | 231-146-5                                | Antimony      | 0,00-5,00 % |
|           | oral: LD50 = 7000 mg/kg                  |               |             |

**Further Information**

There is no requirement for the product to be specially labelled according to EC directives or the corresponding national laws. Labelling according to Regulation (EC) No. 1272/2008 [CLP] Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH)

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

No special measures are necessary.

**After inhalation**

No specific measures for the material in compact form. Not applicable to material in this form.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap.

**After contact with eyes**

No specific measures for the material in compact form. Not applicable to material in this form.

**After ingestion**

No specific measures for the material in compact form. Not applicable to material in this form.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

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Carbon dioxide, Extinguishing powder, Water spray jet  
In case of major fire and large quantities: Water spray jet, alcohol resistant foam.

**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

In case of fire may be liberated: Metal oxide smoke, toxic

**5.3. Advice for firefighters**

Wear chemical resistant suit. In case of fire: Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Observe precautionary regulations. Wear personal protection equipment (refer to section 8).  
Provide adequate ventilation.

**6.2. Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter sewers/surface or ground water. Dispose of in regulated waste disposal.

**6.3. Methods and material for containment and cleaning up****Other information**

Avoid dust formation. Take up dust-free and set down dust-free. Use approved industrial vacuum cleaner for removal.  
Prior to use/application the material must be wetted with water to avoid or reduce dust emission. Take up mechanically, placing in appropriate containers for disposal.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Treat the recovered material as prescribed in the section on waste disposal. Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Personal precautions  
Wear personal protection equipment (refer to section 8).

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

The usual precautionary measures are to be adhered to when handling chemicals.  
Keep away from food, drink and animal feedingstuffs.  
Wash hands before breaks and after work.  
When using do not eat or drink.  
Only wear fitting, comfortable and clean protective clothing.  
Avoid dust formation.  
Use approved industrial vacuum cleaner for removal.  
Never use compressed air for cleaning.  
Prior to use/application the material must be wetted with water to avoid or reduce dust emission.

**Further information on handling**

Avoid contact with eyes and skin. After contact with skin, wash immediately with plenty of water and soap.  
When using do not eat or drink. Keep away from food, drink and animal feedingstuffs.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep only in original packaging.

**Hints on joint storage**

Do not store together with: Oxidizing agent

**Further information on storage conditions**

Store under normal and dry conditions.

Betriebssicherheitsverordnung (BetrSichV) ---

**7.3. Specific end use(s)**

This substance/mixture does not contain any components in concentrations of 0,1 %, or higher than either persistent, bioaccumulative and toxic (PBT) or very persistent and are classified as highly bioaccumulative (vPvB).

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**Exposure limits (EH40)**

| CAS No    | Substance   | ppm | mg/m <sup>3</sup> | fibres/ml | Category      | Origin |
|-----------|---|-----|-------------------|-----------|---------------|--------|
| 7440-50-8 | Copper, dusts and mists (as Cu)                             | -   | 1                 |           | TWA (8 h)     | WEL    |
|           |   | -   | 2                 |           | STEL (15 min) | WEL    |
| 7440-22-4 | Silver, metallic  | -   | 0.1               |           | TWA (8 h)     | WEL    |
| -         | Tin compounds, inorganic, except SnH <sub>4</sub> , (as Sn) | -   | 2                 |           | TWA (8 h)     | WEL    |
|           |   | -   | 4                 |           | STEL (15 min) | WEL    |

**Biological Monitoring Guidance Values (EH40)**

| CAS No    | Substance                             | Parameter | Value    | Test material | Sampling time |
|-----------|---------------------------------------|-----------|----------|---------------|---------------|
| 7439-92-1 | Lead (woman of reproductive capacity) | lead      | 20 µg/dl | blood         | Random        |

**PNEC values**

| CAS No                    | Substance  | Value      |
|---------------------------|--|------------|
| Environmental compartment |  | Value      |
| 7439-92-1                 | lead massive [particle diameter >= 1 mm]         |            |
|                           | Freshwater sediment                              | 174 mg/kg  |
|                           | Marine sediment                                  | 164 mg/kg  |
|                           | Secondary poisoning                              | 16,9 mg/kg |
|                           | Micro-organisms in sewage treatment plants (STP) | 10,9 mg/kg |
|                           | Soil   | 212 mg/kg  |

**Additional advice on limit values**

Provide adequate ventilation as well as local exhaust at critical locations.

**8.2. Exposure controls**

**Appropriate engineering controls**

Provide fresh air. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Not applicable to material in this form. Precautions for safe handling Wear protective gloves and eye/face protection.

If workplace exposure limits are exceeded, respiratory protection must be worn. when working with molten metal.

**Hand protection**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The precise time of rupture can be found out from the manufacturer of the protective gloves and must be observed.

Wear suitable gloves. Suitable gloves type EN ISO 374

**Skin protection**

Common occupational clothing. Only wear fitting, comfortable and clean protective clothing.

**Respiratory protection**

Avoid dust formation. In case of dangerous gases, vapours or dusts self-contained breathing apparatus or suitable masks and filters need to be advised. Particle filter device (EN 143) Type 3

**Environmental exposure controls**

Do not allow to enter into soil/subsoil. Do not allow to enter sewers/surface or ground water.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|                 |           |
|-----------------|-----------|
| Physical state: | solid     |
| Colour:         | metallic  |
| Odour:          | odourless |

**Changes in the physical state**

|   |                |
|---|----------------|
| Melting point/freezing point:                             | 232 °C         |
| Boiling point or initial boiling point and boiling range: | 2.270 °C       |
| Softening point:  | not applicable |
| Flash point:  | not applicable |

**Flammability**

|               |                |
|---------------|----------------|
| Solid/liquid: | not applicable |
|---------------|----------------|

**Explosive properties**

not explosive.

|                            |                |
|----------------------------|----------------|
| Lower explosion limits:    | ---            |
| Upper explosion limits:    | ---            |
| Auto-ignition temperature: | not applicable |

**Self-ignition temperature**

|  |                |
|--|----------------|
| Solid:                                 | not applicable |
| Decomposition temperature:             | not determined |
| pH-Value:                              | not applicable |
| Viscosity / dynamic:                   | not applicable |
| Water solubility:                      | not applicable |
| Partition coefficient n-octanol/water: | not determined |

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Vapour pressure: not determined  
 Density (at 20 °C): 7,29 g/cm<sup>3</sup>  
 Bulk density: not determined  
 Relative vapour density: not applicable

**9.2. Other information**
**Information with regard to physical hazard classes**

Sustaining combustion: No data available  
 Oxidizing properties  
 Not oxidising.

**Other safety characteristics**

Solvent content: Organic solvents: -, - %  
 Maximum VOC content: - % not determined  
 Solid content: 100,00 %  
 Evaporation rate: not applicable

**Further Information**
**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

Reference to other sections: SECTION 10: Stability and reactivity  
 The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

Reference to other sections: SECTION 7: Handling and storage  
 No hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

Prior to use/application the material must be wetted with water to avoid or reduce dust emission.  
 Generation/formation of dust Particle size < 1mm Avoid dust formation.

**10.5. Incompatible materials**

Reference to other sections: SECTION 7: Handling and storage  
 Acid, Strong oxidants and deoxidants.

**10.6. Hazardous decomposition products**

No decomposition if used according to specifications.

**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in GB CLP Regulation**
**Acute toxicity**

Based on available data, the classification criteria are not met.

| CAS No    | Chemical name  |               |         |        |        |
|-----------|----------------|---------------|---------|--------|--------|
|           | Exposure route | Dose          | Species | Source | Method |
| 7440-36-0 | Antimony       |               |         |        |        |
|           | oral           | LD50<br>mg/kg | 7000    | Rat    | GESTIS |

**Irritation and corrosivity**

Based on available data, the classification criteria are not met.  
 Inhalation of dust may cause irritation of the respiratory system.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Specific effects in experiment on an animal**

Toxicological analyses are not available.

**Additional information on tests**

Not applicable to material in this form. There is no requirement for the product to be specially labelled according to EC directives or the corresponding national laws.

**Practical experience**

No special references.

**SECTION 12: Ecological information**
**12.1. Toxicity**

There are no data available on the mixture itself.

| CAS No    | Chemical name            |              |           |         |        |        |
|-----------|--------------------------|--------------|-----------|---------|--------|--------|
|           | Aquatic toxicity         | Dose         | [h]   [d] | Species | Source | Method |
| 7440-50-8 | Copper                   |              |           |         |        |        |
|           | Acute fish toxicity      | LC50<br>mg/l | 0,665     | 96 h    |        | GESTIS |
|           | Acute crustacea toxicity | EC50<br>mg/l | 0,02      | 48 h    |        | GESTIS |
| 7440-36-0 | Antimony                 |              |           |         |        |        |
|           | Acute fish toxicity      | LC50<br>mg/l | 6,2-8,3   | 96 h    |        |        |

**12.2. Persistence and degradability**

none Evidence exists for biodegradation processes.

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**12.4. Mobility in soil**

There are no data available on the mixture itself.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No effects known.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

**Disposal recommendations**

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

**List of Wastes Code - residues/unused products**

170403 CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES); metals (including their alloys); Lead

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Dispose of waste according to applicable legislation. Delivery to an approved waste disposal company.

**SECTION 14: Transport information****Land transport (ADR/RID)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | UN 0000  |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Inland waterways transport (ADN)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | UN 0000  |
| <b>14.2. UN proper shipping name:</b>    | No dangerous good in sense of this transport regulation. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation. |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation. |

**Marine transport (IMDG)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | UN 0000  |
| <b>14.2. UN proper shipping name:</b>    | Not a hazardous material with respect to transportation regulations. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation.             |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation.             |

**Air transport (ICAO-TI/IATA-DGR)**

|  |  |
|--|--|
| <b>14.1. UN number or ID number:</b>     | UN 0000  |
| <b>14.2. UN proper shipping name:</b>    | Not a hazardous material with respect to transportation regulations. |
| <b>14.3. Transport hazard class(es):</b> | No dangerous good in sense of this transport regulation.             |
| <b>14.4. Packing group:</b>              | No dangerous good in sense of this transport regulation.             |

**14.6. Special precautions for user**

No special measures are necessary.

**14.7. Maritime transport in bulk according to IMO instruments**

No special precautionary measures.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

lead massive [particle diameter  $\geq 1$  mm]

Restrictions on use (REACH, annex XVII):

Entry 30, Entry 40, Entry 75

2004/42/EC (VOC): no classification

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

(SEVESO III):

Additional information: 0

**Additional information**



According to EC directives or the corresponding national regulations the product does not have to be labelled.  
Classification according to Regulation (EC) No 1272/2008 [CLP]

**National regulatory information**

Employment restrictions: Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.  
Water hazard class (D): - - non-hazardous to water

**Additional information**

Betriebssicherheitsverordnung (BetrSichV) ---  
No further data.

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

\* Data changed compared with the previous version.

**Abbreviations and acronyms**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
"IATA-DGR: Dangerous Goods Regulations by the ""International Air Transport Association"" (IATA)"  
ICAO: International Civil Aviation Organization  
"ICAO-TI: Technical Instructions by the ""International Civil Aviation Organization"" (ICAO)"  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)

**Relevant H and EUH statements (number and full text)**

|        |   |
|--------|---|
| H228   | Flammable solid.                                      |
| H335   | May cause respiratory irritation.                     |
| H351   | Suspected of causing cancer.                          |
| H360FD | May damage fertility. May damage the unborn child.    |
| H362   | May cause harm to breast-fed children.                |
| H400   | Very toxic to aquatic life.                           |
| H410   | Very toxic to aquatic life with long lasting effects. |

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

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**Identified uses**

| No | Short title                     | LCS | SU | PC | PROC | ERC | AC | TF | Specification |
|----|---------------------------------|-----|----|----|------|-----|----|----|---------------|
| 1  | Auxiliary for dental technology | PW  | 20 | 0  | 0    | 4   | 0  | 94 | 100           |

LCS: Life cycle stages

PC: Product categories

ERC: Environmental release categories

TF: Technical functions

SU: Sectors of use

PROC: Process categories

AC: Article categories

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*