SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Wire electrode for electrical discharge machining

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Electrical discharge machining

1.3. Supplier

Thermocompact
181, Route de Sarves - Metz-Tessy - CS 70021
PRINGY CEDEX, 74371 - FRANCE
T +33 (0)4 50 27 20 02 - F +33 (0)4 50 27 17 37
thermo@thermocompact.com - www.thermocompact.com

1.4. Emergency telephone number
No additional information available

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None, to our knowledge.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>(CAS-No.) 7440-50-8</td>
<td>&gt; 50</td>
<td>Not classified</td>
</tr>
<tr>
<td>Zinc</td>
<td>(CAS-No.) 7440-66-6</td>
<td>&lt; 50</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : In case of inhalation of fumes of molten material or dust: Move the affected person away from the contaminated area and into the fresh air. Get medical advice/attention.

First-aid measures after skin contact : Remove all contaminated clothing and footwear. Rinse with plenty of water. If case of redness or irritation, call a doctor.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Consult an eye specialist.

First-aid measures after ingestion : If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : None known.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.
SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Special powder against metallic fire (Class D).

5.2. Specific hazards arising from the chemical

Fire hazard: Not classified as flammable according to EC criteria, but may present a risk in the event of a fire.

Explosion hazard: Potential dust explosion hazard from airborne release.

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

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Contain the extinguishing fluids by bunding. Do not breathe fumes.

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: Avoid contact with skin and eyes.

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

Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

For containment: Mechanically recover the product. Gather the product and place it in a spare container that has been suitably labeled.

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. Avoid contact with skin and eyes. Do not breathe dust.

Hygiene measures: Do not drink, eat or smoke in the workplace. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Protect from moisture. Store in a dry, cool place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Wire electrode for electrical discharge machining

No additional information available

Copper (7440-50-8)

USA - ACGIH - Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Local name</th>
<th>ACGIH TWA (mg/m³)</th>
<th>Remark (ACGIH)</th>
<th>Regulatory reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper, as Cu</td>
<td>0.2 mg/m³ Fume (Cu)</td>
<td>TLV® Basis: Irr; GI; metal fume fever</td>
<td>ACGIH 2019</td>
</tr>
<tr>
<td>1 mg/m³ Dusts and mists (as Cu)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

USA - OSHA - Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Local name</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>0.1 mg/m³ (Fume (as Cu))</td>
</tr>
<tr>
<td>1 mg/m³ (Dusts and mists (as Cu))</td>
<td></td>
</tr>
</tbody>
</table>
Wire electrode for electrical discharge machining
Safety Data Sheet

Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1
---|---
USA - NIOSH - Occupational Exposure Limits
NIOSH REL (TWA) (mg/m³) | 1 mg/m³ Copper (dusts and mists), as Cu
zinc (7440-66-6) | 0.1 mg/m³ (fume)
No additional information available

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

8.3. Individual protection measures/Personal protective equipment
Hand protection:
Protective gloves. Breakthrough time: refer to the recommendations of the supplier
Eye protection:
Safety glasses with side shields
Respiratory protection:
Not necessary with sufficient ventilation

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Color: Colorless
Odor: odorless
Odor threshold: No data available
pH: Not applicable
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: Not applicable
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): The product is not flammable.
Vapor pressure: No data available
Relative vapor density at 20 ºC: No data available
Relative density: No data available
Solubility: Water: Solubility in water of component(s) of the mixture:
• Copper: Insoluble • zinc: Insoluble
Partition coefficient n-octanol/water (Log Pow): No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosion limits: Not applicable
Explosive properties: Not explosive.
Oxidizing properties: Non oxidizing material according to EC criteria.

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
To our knowledge, the product does not present any particular risk, under normal conditions of use.
10.2. Chemical stability
Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Water, humidity. Avoid raising powdered material due to explosion hazard.

10.5. Incompatible materials

10.6. Hazardous decomposition products
On contact with acid releases: Hydrogen.

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

Skin corrosion/irritation : Not classified
pH: Not applicable

Serious eye damage/irritation : Not classified
pH: Not applicable

Respiratory or skin sensitization : 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
Viscosity, kinematic : No data available
Symptoms/effects : None known.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general : Presents no particular risk to the environment, provided the disposal requirements (see section 13) and national or local regulations are complied with.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Wire electrode for electrical discharge machining</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not readily biodegradable.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available
## SECTION 13: Disposal considerations

### 13.1. Disposal methods

<table>
<thead>
<tr>
<th>Waste treatment methods</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispose of in accordance with relevant local regulations.</td>
<td>The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal.</td>
</tr>
</tbody>
</table>

## SECTION 14: Transport information

### Department of Transportation (DOT)

- In accordance with DOT: Not applicable

### Transportation of Dangerous Goods

- Not applicable

### Transport by sea

- Not applicable

### Air transport

- Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

- **Copper (7440-50-8)**: Listed on the United States TSCA (Toxic Substances Control Act) inventory and Subject to reporting requirements of United States SARA Section 313
- **zinc (7440-66-6)**: Listed on the United States TSCA (Toxic Substances Control Act) inventory and Subject to reporting requirements of United States SARA Section 313

### 15.2. International regulations

#### CANADA

- **Copper (7440-50-8)**: Listed on the Canadian DSL (Domestic Substances List)
- **zinc (7440-66-6)**: Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

- **Copper (7440-50-8)**: Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- **zinc (7440-66-6)**: Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

- **Copper (7440-50-8)**: Listed on the AICS (Australian Inventory of Chemical Substances) and Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) and Listed on the Korean ECL (Existing Chemicals List) and Listed on NZIoC (New Zealand Inventory of Chemicals) and Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) and Listed on INCS (Mexican National Inventory of Chemical Substances) and Listed on Turkish Inventory of Chemical
Wire electrode for electrical discharge machining
Safety Data Sheet

zinc (7440-66-6)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
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- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on INSO (Mexican national Inventory of Chemical Substances)
- Listed on Turkish inventory of chemical

15.3. US State regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper(7440-50-8)</td>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
<tr>
<td>zinc(7440-66-6)</td>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 02/26/2020
Other information : Safety data sheet established by : LISAM TELEGIS
17 rue de la Couture F-60400 Passel

Indication of changes:
This sheet was updated (refer to the date at the top of this page). (see section(s) : 1.3).

SDS US (GHS HazCom 2012)

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.