

Wire electrode for electrical discharge machining

Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)
Issue date: 2024-04-18 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

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

1.2. Recommended use and restrictions on use

Recommended uses and restrictions : 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 identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Acute toxicity (oral) Category 4 H302 Harmful if swallowed
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS CA labeling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Warning

Hazard statements (GHS CA) : H302 - Harmful if swallowed

Precautionary statements (GHS CA) : P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - IF SWALLOWED: Call a POISON CENTER, a doctor if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards which do not result in classification : None to our knowledge.

2.4. Unknown acute toxicity (GHS CA)

No additional information available

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Alloy consisting principally of:
copper

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Copper	-	CAS-No.: 7440-50-8	60 – 80	Acute Tox. 4 (Oral), H302 Comb. Dust

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. If irritation persists, consult a doctor.

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. If irritation persists, consult a doctor.

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 : Swallowing a small quantity of this material presents some health hazard.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Unsuitable extinguishing media

No additional information available

5.3. Specific hazards arising from the hazardous product

Fire hazard : Not classified as flammable, 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.

5.4. Special protective equipment and precautions for fire-fighters

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

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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

Personal Precautions, Protective Equipment and Emergency Procedures : Concerning personal protective equipment to use, see item 8.

6.2. Methods and materials 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.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

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 : Store in original container. Protect from moisture. Store in a dry, cool place. After opening, store the product at less than 25°C, and at less than 60% relative humidity. Use within 10 days of unpacking.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (7440-50-8)	
Canada (Alberta) - Occupational Exposure Limits	
Local name	Copper
OEL TWA	0.2 mg/m ³ Fume 1 mg/m ³ Dusts/mists, as Cu
Regulatory reference	Alberta Regulation 191/2021
Canada (Quebec) - Occupational Exposure Limits	
Local name	Copper (as Cu)
VEMP (OEL TWAEV)	0.2 mg/m ³ Fume 1 mg/m ³ Dusts & mists
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety
Canada (British Columbia) - Occupational Exposure Limits	
Local name	Copper, as Cu

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Copper (7440-50-8)	
OEL TWA	1 mg/m ³ Dusts and mists 0.2 mg/m ³ Fume
Regulatory reference	OHS Guidelines Part 5: Chemical Agents and Biological Agents (WorkSafe BC)
Canada (Manitoba) - Occupational Exposure Limits	
Local name	Copper, as Cu
OEL TWA	0.2 mg/m ³ (Fume) 1 mg/m ³ (Dusts and mists)
Notations and remarks	TLV® Basis: Irr; GI; metal fume fever
Regulatory reference	ACGIH 2024
Canada (New Brunswick) - Occupational Exposure Limits	
Local name	Copper Fume as Cu
OEL TWA	0.2 mg/m ³
Notations and remarks	Irr; GI; metal fume fever
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
Local name	Copper, as Cu
OEL TWA	0.2 mg/m ³ (Fume) 1 mg/m ³ (Dusts and mists)
Notations and remarks	TLV® Basis: Irr; GI; metal fume fever
Regulatory reference	ACGIH 2024
Canada (Nova Scotia) - Occupational Exposure Limits	
Local name	Copper, as Cu
OEL TWA	0.2 mg/m ³ (Fume) 1 mg/m ³ (Dusts and mists)
Notations and remarks	TLV® Basis: Irr; GI; metal fume fever
Regulatory reference	ACGIH 2024
Canada (Nunavut) - Occupational Exposure Limits	
Local name	Copper, (as Cu)
OEL TWA	0.2 mg/m ³ Fume 1 mg/m ³ Dusts and mists
OEL STEL	0.6 mg/m ³ Fume 3 mg/m ³ Dusts and mists
Regulatory reference	Occupational Health and Safety Regulations, Nu Reg 003-2016 (Amendment R-044-2021)
Canada (Northwest Territories) - Occupational Exposure Limits	
Local name	Copper, (as Cu)
OEL TWA	0.2 mg/m ³ Fume 1 mg/m ³ Dusts and mists
OEL STEL	0.6 mg/m ³ Fume 3 mg/m ³ Dusts and mists
Regulatory reference	Occupation Health and Safety Regulations R-039-2015 (R-013-2020)

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Copper (7440-50-8)	
Canada (Ontario) - Occupational Exposure Limits	
Local name	Copper - Fume
OEL TWAEV	0.2 mg/m ³
Regulatory reference	Ontario Occupational Exposure Limits under Regulation 833
Canada (Prince Edward Island) - Occupational Exposure Limits	
Local name	Copper, as Cu
OEL TWA	0.2 mg/m ³ (Fume) 1 mg/m ³ (Dusts and mists)
Notations and remarks	TLV® Basis: Irr; GI; metal fume fever
Regulatory reference	ACGIH 2024
Canada (Saskatchewan) - Occupational Exposure Limits	
Local name	Copper, (as Cu)
OEL TWA	0.2 mg/m ³ fume 1 mg/m ³ dusts and mists
OEL STEL	0.6 mg/m ³ fume 3 mg/m ³ dusts and mists
Regulatory reference	The Occupational Health and Safety Regulations, 2020. Chapter S-15.1 Reg 10

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

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
Appearance	: No data available
Color	: No data available
Odor	: odorless
Odor threshold	: No data available
pH	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: No data available

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Decomposition temperature	: No data available
Flammability (solid, gas)	: The product is not flammable
Vapor pressure	: Not applicable
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive.
Explosion limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	: On contact with acid releases: Hydrogen.
Chemical stability	: Stable at ambient temperature and under normal conditions of use.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Water, humidity. Avoid raising powdered material due to explosion hazard.
Incompatible materials	: Strong bases. Strong oxidizing agents. Halogenated compounds. Ammonia. Alkali metals. Halogenated hydrocarbons.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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ATE CA (oral)	625 mg/kg body weight
Copper (7440-50-8)	
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation rat (mg/l)	> 5.11 mg/l (OECD 436 method)
ATE CA (oral)	500 mg/kg body weight

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

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Viscosity, kinematic	Not applicable
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Symptoms/effects : Swallowing a small quantity of this material presents some health hazard.

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.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

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Persistence and degradability	Not readily biodegradable.
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Copper

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of in accordance with relevant local regulations.

Additional information : The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal.

SECTION 14: Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated

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TDG	DOT	IMDG	IATA
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated

14.6. Special precautions for user

TDG

Not regulated

DOT

Not regulated

IMDG

Not regulated

IATA

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

Copper (7440-50-8)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Copper (7440-50-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

SECTION 16: Other information

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Full text of H-phrases:	
H302	Harmful if swallowed

Abbreviations and acronyms:	
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
LC50	Median lethal concentration
LD50	Median lethal dose
DOT	Department of Transportation (DOT)
ATE	Acute Toxicity Estimate
SDS	Safety Data Sheet
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
OECD	Organisation for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
VLE	Valeur Limite d'Exposition

Safety Data Sheet (SDS), Canada

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.