Ferro-Ni, FeNi/Cu

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SDS Ref.: E11

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

1.1. Product identifier

Product name : Ferro-Ni, FeNi/Cu

Type of product : Coated Electrodes for Manual Metal Arc Welding

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

1.2.1. Relevant identified uses

Main use category : Industrial use,Professional use,Consumer use

Industrial/Professional use spec : Industrial

Use of the substance/mixture : Coated Electrodes for Manual Metal Arc Welding

Function or use category : Welding and soldering agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SELECTARC WELDING (FSH Welding Group)
4, Rue de la fonderie
25220 ROCHE-LEZ-BEAUPRE - FRANCE
T 33 (0)3 81 60 51 72 - F 33 (0)3 81 60 57 90
f.perrichon@fsh-welding.com - www.fsh-welding.com

1.4. Emergency telephone number

Emergency number : ORFILA (France) (33) (0)1 45 42 59 59

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Specific target organ toxicity — Repeated exposure, Category 1	H372

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Coated electrodes have a compact constitution and are to be considered as equivalent to metals in massive form. As a consequence, derogation from labelling requirements shall apply according to EEC/67/548 directive (Annexe VI) and 1272/2008 (EC) regulation (Article 23).

2.3. Other hazards

Other hazards not contributing to the classification : Hazards during welding process : Arc rays. Heat and noise from the electrical arc. Welding fumes / gases. Electric shock. Fire and explosion hazards. Exposure to electromagnetic fields.

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nickel	(CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-00-7 (REACH-no) 01-211943	35,5 - 40,5	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372
Copper powder	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6 (REACH-no) 01-2119480154-42	1,5 - 3	Aquatic Acute 1, H400 Aquatic Chronic 3, H412

nickel powder; [particle diameter < 1mm]	(CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-01-4 (REACH-no) 01-2119438727-29	< 2	Carc. 2, H351 STOT RE 1, H372 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Copper substance with a Community workplace exposure limit	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6	< 0,5	Not classified

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Remove person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, consult always a physician.

First-aid measures after skin contact : When symptoms occur: rinse immediately with plenty of water. The melted product adheres to the skin and causes burns. Treat as thermal burns.

First-aid measures after eye contact : In case of contact with dust or fumes with the eyes, rinse immediately with plenty of water.

First-aid measures after ingestion : Ingestion unlikely.

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

Symptoms/effects after inhalation : Welding fumes are classified carcinogenic to humans "group 1" by IARC (Monograph 118, 2017).

Symptoms/effects after skin contact : The melted product adheres to the skin and causes burns. Irritation or eye burns due to the radiation thermal, infrared or ultraviolet (arc welding).

Symptoms/effects after eye contact : Contact with welding fumes can be irritating to the eyes.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : No special requirements. Only combustible materials adjacent to the welding unit may cause a fire or explosion. Means of extinction must therefore be adapted to the inflamed matters.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Coated electrodes are not flammable. Fire or explosion hazards are provoqued by heat sources (molten metal, slag, electrodes stubend, recently welded pieces, etc) combined with flammable materials (included dust and gaz).

Hazardous decomposition products in case of fire : Toxic and corrosive vapours may be released.

5.3. Advice for firefighters

Precautionary measures fire : Respiratory protection equipment may be necessary.

Firefighting instructions : Prevent fire fighting water from entering the environment. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : None.

6.1.1. For non-emergency personnel

Protective equipment : No special protection required.

Emergency procedures : Start cleanup only if spill has cooled completely. Mechanically recover the product.

6.1.2. For emergency responders

Protective equipment : No special protection required.

Emergency procedures : Start cleanup only if spill has cooled completely. Mechanically recover the product.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use personal protective equipment as required. Provide good ventilation in process area to prevent formation of vapour. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry place. Keep container closed when not in use.

Incompatible products : Strong acids.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (7440-50-8)		
EU	Local name	Copper
EU	IOELV TWA (mg/m³)	0,01 mg/m³ (respirable fraction)
EU	Notes	(Year of adoption 2014)
EU	Regulatory reference	SCOEL Recommendations
France	Local name	Cuivre
France	VME (mg/m³)	1 mg/m³ (Dust)
France	VLE (mg/m³)	2 mg/m³ (poussières), en Cu
France	Note (FR)	Valeurs recommandées/admises
France	Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	1 mg/m³ (Dust)
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m³)	1 mg/m³ (Dust)
USA - ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (Dust)

Nickel (7440-02-0)		
EU	IOELV STEL (mg/m³)	1 mg/m³
France	VME (mg/m³)	1 mg/m³
France	VLE (mg/m³)	1 mg/m³
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m³)	0,5 mg/cm³
USA - ACGIH	ACGIH TWA (mg/m³)	1 mg/m³

nickel powder; [particle diameter < 1mm] (7440-02-0)		
France	VME (mg/m³)	1
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m³)	0.5

Copper powder (7440-50-8)		
France	VME (mg/m³)	1 mg/m³ Dust
France	VLE (mg/m³)	2 mg/m³ Dust
France	Note (FR)	Fumées : VME = 0,2 mg/m3
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	1 mg/m³
Germany	TRGS 910 Acceptable concentration notes	
United Kingdom	WEL TWA (mg/m³)	1 mg/m³ Dust
United Kingdom	WEL STEL (mg/m³)	2 mg/m³ Dust

Copper powder (7440-50-8)		
United Kingdom	Remark (WEL)	Fumes : VME = 0.2 mg/m3
USA - ACGIH	ACGIH TWA (mg/m³)	1 mg/m³

8.2. Exposure controls

Personal protective equipment:

Insufficient ventilation: wear respiratory protection. Insulated gloves. Safety glasses. Heatproof clothing.

Hand protection:

Welding gloves in leather and refractory fleece with cufflinks, complying with standard EN 12477.

Eye protection:

Mask active welder with electro-optical or passive display with tinted glass. Eye protection equipment must conform to standard EN 175.

Skin and body protection:

Clothing protection suitable for welding operations and comply with standards EN 470 - 1 and EN 531.

Respiratory protection:

The protection of the welder against releases of vapours and gases must be ensured by ventilation or forced ventilation of the welding machine. When using the product in a confined environment or excessive production of smoke, wear a mask equipped with a built-in respiratory filter type FFP3 or a stand-alone system ventilation, complies with EN 12941.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Coated Electrodes for Manual Metal Arc Welding.
Colour	: No data available
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 1000 - 1500 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 7000 - 8000 kg/m³
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
No additional information available

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
Welding fumes / gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Harmful if inhaled.

ATE CLP (dust,mist)	2,407 mg/l/4h

Copper (7440-50-8)	
LD50 oral rat	>= 413 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	2,55 mg/l/4h

Nickel (7440-02-0)	
LD50 oral rat	> 2000 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 2,55 mg/l/4h

Copper powder (7440-50-8)	
LD50 oral rat	413 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	5,11 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Alloys containing nickel are classified for skin sensitisation when the release rate of 0,5 µg Ni/cm2/week is exceeded, in case of direct and prolonged contact with skin (1272/2008/EC, Annexe VI).

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Other information : Welding fumes are classified carcinogenic to humans "group 1" by IARC (Monograph 118, 2017).

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

Nickel (7440-02-0)	
LC50 fish 1	0,32 g/l Brachydanio rerio
LC50 fish 2	0,35 g/l Fundulus heteroclitus
NOEC chronic fish	0,04 mg/l Brachydanio rerio

nickel powder; [particle diameter < 1mm] (7440-02-0)	
LC50 fish 1	0,4 - 320 mg/l Pimephales promelas / Brachydanio rerio
LC50 fish 2	26,6 - 350 mg/l Atherinops affinis / Fundulus heteroclitus
NOEC chronic fish	0,04 mg/l Brachydanio rerio

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil

Ferro-Ni, FeNi/Cu	
Mobility in soil	<=

12.5. Results of PBT and vPvB assessment

Ferro-Ni, FeNi/Cu
PBT: not relevant – no registration required
vPvB: not relevant – no registration required

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR) : Not applicable
IMDG
Transport hazard class(es) (IMDG) : Not applicable
IATA
Transport hazard class(es) (IATA) : Not applicable
ADN
Transport hazard class(es) (ADN) : Not applicable
RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group
Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards
Dangerous for the environment : No
Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.
Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Carc. 2	Carcinogenicity, Category 2
Skin Sens. 1	Skin sensitisation, Category 1

STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

SDS EU (REACH Annex II)

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.