



# Cu-Zn Alloys

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Date of issue: 15/01/2018 Revision date: 09/01/2018 Supersedes: 19/09/2014 Version: 2.0

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

#### 1.1. Product identifier

Product form : Mixture  
Name : Cu-Zn Alloys

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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only  
Use of the substance/mixture : Rods, plates and ingots  
Intermediate for copper alloy castings.

##### 1.2.2. Uses advised against

No additional information available

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

ALEACIONES, PREALEACIONES Y DESOXIDANTES, SL  
P.I. Pla de Llerona, Carrer Luxemburgs/n  
08520 Les Franqueses del Vallès - Spain  
T (+34) 93 840 49 95 - F (+34) 93 840 49 96  
[info@apd-fundicion.com](mailto:info@apd-fundicion.com)

#### 1.4. Emergency telephone number

Emergency number : (+34) 93 840 49 95  
Office hours

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Not classified

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

No labelling applicable

#### 2.3. Other hazards

PBT: not yet assessed  
vPvB: not yet assessed

### 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]
Copper (powder/dust, > 10µm and <1 mm)	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6	55 - 87,5	Aquatic Acute 1, H400 Aquatic Chronic 3, H412
zinc powder - zinc dust (stabilised)	(CAS-No.) 7440-66-6 (EC-No.) 231-175-3 (EC Index-No.) 030-001-01-9	40 - 50	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nickel (powder <1mm)	(CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-00-7	<= 6	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372 Aquatic Chronic 3, H412

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Manganese substance with a Community workplace exposure limit	(CAS-No.) 7439-96-5 (EC-No.) 231-105-1	<= 5	Not classified
Lead (powder/dust <1mm)	(CAS-No.) 7439-92-1 (EC-No.) 231-100-4	<= 2,8	Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Tin (metal massive) substance with a Community workplace exposure limit	(CAS-No.) 7440-31-5 (EC-No.) 231-141-8	<= 1,5	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 exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Brush off loose particles from skin. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects	: Inhalation of fumes may cause metal fume fever. Heated product causes burns.
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#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder.
Unsuitable extinguishing media	: Do not use extinguishing media containing water.

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

Fire hazard	: In molten state: reacts violently with water (moisture).
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#### 5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: 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	: Take care while working with the hot material.
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##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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##### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters. Avoid release to the environment.

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

Methods for cleaning up	: On land, sweep or shovel into suitable containers. Collect the hardened product as any solid. Store away from other materials.
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#### 6.4. Reference to other sections

See Heading 8. Exposure controls/personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Avoid breathing fume. Upon heating, toxic fumes are formed. Provide local exhaust or general room ventilation.
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Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, well-ventilated place. Store in a dry place. Protect from moisture.  
 Incompatible products : Strong bases. Strong acids.

### 7.3. Specific end use(s)

See section 1.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Copper (powder/dust, &gt; 10µm and &lt;1 mm) (7440-50-8)</b>		
EU	Local name	Copper
EU	IOELV TWA (mg/m³)	0,01 mg/m³ (respirable fraction)
EU	Notes	SCOEL Recommendations (2014)
United Kingdom	Local name	Copper
United Kingdom	WEL TWA (mg/m³)	0,2 mg/m³ fume (as Cu) 0,2 mg/m³ fume (as Cu) 1 mg/m³ and compounds, dusts and mists (as Cu)
United Kingdom	WEL STEL (mg/m³)	2 mg/m³ and compounds, dusts and mists (as Cu)
<b>Nickel (powder &lt;1mm) (7440-02-0)</b>		
EU	Local name	Nickel metal
EU	IOELV TWA (mg/m³)	0,005 mg/m³ (respirable fraction) 0,01 mg/m³ (inhalable fraction)
EU	Notes	SCOEL Recommendations (2011)
United Kingdom	Local name	Nickel
United Kingdom	WEL TWA (mg/m³)	0,1 mg/m³ and its inorganic compounds (except nickel tetracarbonyl), water-soluble nickel compounds (as Ni) 0,5 mg/m³ and its inorganic compounds (except nickel tetracarbonyl), nickel and water insoluble nickel compounds (as Ni)
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity), Carc (nickel oxides and sulphides)(Capable of causing cancer and/or heritable genetic damage. See paragraphs 49–51), Sen (nickel sulphate)(Capable of causing occupational asthma. See paragraphs 53–56)
<b>Lead (powder/dust &lt;1mm) (7439-92-1)</b>		
EU	Local name	Lead and its inorganic compounds
EU	IOELV TWA (mg/m³)	100 µg/m³
EU	Notes	SCOEL Recommendations (2002)
<b>Tin (metal massive) (7440-31-5)</b>		
EU	Local name	Tin and inorganic tin compounds
EU	Notes	SCOEL Recommendations (2003)
United Kingdom	Local name	Tin
United Kingdom	WEL TWA (mg/m³)	2 mg/m³ compounds, inorganic, except SnH4, (as Sn4) 0,1 mg/m³ compounds, organic, except Cyhexatin (ISO), (as Sn)
United Kingdom	WEL STEL (mg/m³)	4 mg/m³ compounds, inorganic, except SnH4, (as Sn4) 0,2 mg/m³ compounds, organic, except Cyhexatin (ISO), (as Sn)
<b>Aluminium (powder stabilised) (7429-90-5)</b>		
United Kingdom	Local name	Aluminium
United Kingdom	WEL TWA (mg/m³)	2 mg/m³ alkyl compounds 2 mg/m³ salts, soluble 10 mg/m³ metal, inhalable dust 4 mg/m³ metal, respirable dust
<b>Silicon (7440-21-3)</b>		
United Kingdom	Local name	Silicon
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ inhalable dust 4 mg/m³ respirable dust

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Manganese (7439-96-5)		
EU	Local name	Manganese
EU	IOELV TWA (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup> (inhalable fraction) 0,05 mg/m <sup>3</sup> (respirable fraction)
EU	Notes	SCOEL Recommendations (2011)
United Kingdom	Local name	Manganese
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0,5 mg/m <sup>3</sup> and its inorganic compounds (as Mn)

### 8.2. Exposure controls

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Welders gloves (Technical Standard DIN 4841-4)

#### Eye protection:

For splash risk use face shield (EN 166).

#### Skin and body protection:

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

#### Respiratory protection:

Wear appropriate mask. Filter EN 143 - P2

#### Personal protective equipment symbol(s):



#### Other information:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Rods, plates and ingots.
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 875 - 895 °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)	: Flammable solid, Metal powder.
Vapour Pressure 20°C	: No data available
Vapour density	: No data available
Relative density	: No data available
Density	: 8,5 g/cm <sup>3</sup> (20 °C)
Solubility	: Insoluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available

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Oxidising properties : No data available  
Explosive limits : No data available

### 9.2. Other information

Other properties : Specific heat: 0.09 g/cm<sup>3</sup>. Thermal conductivity: 0.28-0.29 (cal·cm)/(cm<sup>2</sup>·s·°C) ((20 °C)).  
Electric conductivity: 16 m/ohm mm<sup>2</sup> ((20 °C)). Electrical resistivity: 0.062-0.064 ohm·mm<sup>2</sup>/m ((20 °C)).

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable (in terms of reactivity hazards) under recommended storage & use conditions (see Section 7).

### 10.2. Chemical stability

Stable (in terms of chemical stability) under recommended storage & use conditions (see Section 7).

### 10.3. Possibility of hazardous reactions

Violent to explosive reaction on exposure to temperature rise with water (moisture).

### 10.4. Conditions to avoid

Water, humidity.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Burning material releases heavy metal oxide fumes.

## 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  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitisation : 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

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity : Not classified  
Chronic aquatic toxicity : Not classified

### 12.2. Persistence and degradability

Cu-Zn Alloys	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Cu-Zn Alloys	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

Cu-Zn Alloys	
Ecology - soil	Not established.

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### 12.5. Results of PBT and vPvB assessment

#### Cu-Zn Alloys

PBT: not yet assessed

vPvB: not yet assessed

### 12.6. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

27. Nickel	Nickel (pow der <1mm)
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Cu-Zn Alloys
63. Lead and its compounds	Lead (pow der/dust <1mm)

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Carc. 2	Carcinogenicity, Category 2
Repr. 1A	Reproductive toxicity, Category 1A
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.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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*