



CERTIFIED
TRC00881



Revised on 2/5/16

Safety Data Sheets

Copper Zinc Lead Alloys (Brass)

Information sheet for articles¹

1. Identification of the article and of the supplier

Application / use of the article:

Articles from brass like tubes, bars, plates, sheets

Further information contact / supplier information:

Parker Steel Company
1625 Indian Wood Circle
Maumee, Ohio 43537

P: 800-333-4140

Emergency:

Chemtrec (US transportation) 800-424-9300
Canutec (Canadian transportation) 613-996-6666

Remarks

Semi-finished products from copper and copper alloys are articles according to Regulation (EC) No. 1907/2006 (REACH Regulation). For articles it is not mandatory by law to issue a safety data sheet. To provide information to our customers this voluntarily information sheet was compiled, but it is not subject to the formal requirements of the REACH Regulation.

2. Hazard identification

When supplied in solid form the articles from copper and copper alloys are nonhazardous. If they are subsequently processed in any way which might produce airborne dust or fumes, for instance by dry grinding, abrading, electro discharge machining, melting or welding (the material itself) then an inhalation hazard could arise.

General handling, stamping, forming and most machining operations are nonhazardous. Heat treatment in air up to about 400 °C is non-hazardous but higher temperatures may give rise to loss of oxide, which could cause hazardous inhalation. This can be avoided by treatment in inert atmosphere.

¹ We confirm that the information involved in the drawing up of this document has been checked to the best of our knowledge for completeness, correctness and current relevance. We shall inform our customers about mistakes which transpire to exist in information included in this declaration as well as about amendments about which we become aware prior to a delivery. We declare our agreement with the fact that our information is to be used by our customers along the supply chain. We provide a guarantee for any damages which can be proved to ensue from intentionally incorrect or incomplete documentation.

3. Composition / Information on ingredients

Description: Brass (Metal in compact form)

Material Codes: Copper Alloy

| KME material Trade name | EN Material code (CEN/TS 13388:2008-08) | EN Material number (CEN/TS 13388:2008-08) | ASTM UNS-number |
|----------------------------|---|---|--------------------|
| | CuZn35Pb1 | CW 600 N | |
| | CuZn35Pb2 | CW 601 N | |
| | CuZn36Pb2As | CW 602 N | |
| | CuZn36Pb3 | CW 603 N | |
| | CuZn36Pb1,5AsAl | | |
| | CuZn37Pb2 | CW 606 N | |
| | CuZn38Pb1 | CW 607 N | |
| | CuZn38Pb2 | CW 608 N | |
| | CuZn39Pb1 | CW 611 N | |
| | CuZn39Pb2 | CW 612 N | |
| | CuZn39Pb3 | CW 614 N | |
| | CuZn40Pb1Al | CW 616 N | |
| | CuZn40Pb2 | CW 617 N | |
| | CuZn41Pb1Al | CW 620 N | |
| | CuZn38AlFeNiPbSn | CW 715 R | |

The classifications mentioned below reflect the classification of the responding pure substance and are for information only. Copper alloys are special preparations according to Regulation (EC) 1907/2006 (REACH).

Classified alloy components

| Number | Name of component | Classification CLP / EU | Content (w/w) / remark |
|--|-------------------|---|------------------------|
| CAS: 7440-02-0 EINECS: 231-111-4 Index-No.: 028-002-00-7 | Nickel | Carc. Cat 3, Xn; R40-43 S (2-)22-36 GHS08, Carc. 2; H351 GHS07, Skin Sens. 1; H317, Wng | Max 3 % |
| CAS: 7440-38-2 EINECS: 231-148-6 | Arsenic | T, N, R 23/25-50/53 Danger: 3.1 O/3,3.1.I/3 Warning: 4.1.C/1 | 0 – 0,1 % |

Additional alloy components, respective to individual alloy

| Number | Name of component | Classification | Content (w/w) |
|-------------------------------------|-------------------|----------------|---------------|
| CAS: 7440-50-8 EINECS: 231-159-6 | Copper | - | 58 – 65 % |
| CAS: 7440-66-6 EINECS: 231-175-3 | Zinc | - | Balance |
| CAS: 7429-90-5 EINECS: 231-072-3 | Aluminium | | Max 2 % |
| CAS: 7439-89-6 EINECS: 231-096-4 | Iron | | Max 2 % |
| CAS: 7440-21-3 EINECS: 231-130-8 | Silicon | | Max 1 % |
| CAS: 7439-92-1 EINECS: 231-100-4 | Lead | | Max 3,5 % |
| CAS: 7440-31-5 EINECS: 231-141-8 | Tin | | Max 1 % |

4. First aid -measures

General information: There is no acute risk associated and no special measures required.

| Exposure | Measures |
|--------------|---|
| Inhalation | Ensure supply of fresh air. In the event of symptoms refer to medical treatment. In practice any exposure can only arise from operations such as grinding, abrading, electro discharge machining, welding or melting and is likely to be at low levels which will not cause immediate symptoms. |
| Skin contact | Normally no skin irritation. |
| Eye contact | Rinse thoroughly with plenty of water and seek medical advice. Use normal industrial protection to protect against foreign bodies entering the eyes. |
| Ingestion | In the event of symptoms refer to medical treatment. Use normal industrial hygiene. |

5. Fire fighting measures

| | |
|--------------------------------------|--|
| suitable extinguishing agents | Use fire extinguishing methods suitable to surrounding conditions. |
| Protective equipment | No special measures required |

6. Accidental release measures

| | |
|---------------------------------|------------------------------|
| Personal Protection | Not required, not applicable |
| Environmental protection | Not required, not applicable |

7. Handling and storage

Handling

| | |
|--|---|
| Protection of personal health and environment | Control are only applicable to any process which might produce air-borne dust or fumes, which are subject to Health and Safety Executive Maximum Exposure as shown in the table 8.1 |
|--|---|

Storage

| | |
|-------------------------------------|--------------------------|
| Safety of persons and things | No special requirements. |
| Co-storage / maximum storage | No special requirements. |

8. Exposure controls and personal protections

Limitation and control of the exposure at the working place

If breathable dust or smoke occurs by machining, the exposition to workers should be controlled with an exhaust filter system to meet the limit values. As an additional measure personal protection as a filter mask or an independent breathing helmet may be used.

Occupational Exposure Limit Values for possible hazards during processing

Link to GESTIS International Limit Values: http://bgia-online.hvbg.de/LIMITVALUE/WebForm_gw.aspx

| Personal protective equipment | Recommendation |
|-------------------------------|--|
| Respiratory | Use an industrial filter mask (type P2) when work-place limits are exceeded. |
| Hands | Protective gloves are recommended, depending on the handling. |
| Eyes | Eye protection is recommended, depending on the processing. |
| Body | Wear suitable protective clothing, depending on the processing. |

9. Physical and chemical properties

10.

| Parameter | description |
|--------------------------------------|---|
| Colour | Metallic yellow |
| State of aggregation | solid |
| Density | 8,3 g/cm ³ (Lit.) |
| Solubility in water | insoluble |
| Odour | odourless |
| Melting point | 870 - 900 °C (Lit.) |
| Boiling point / boiling range | undetermined |
| Flash point | Not applicable |
| Ignition (solid, gaseous) | Not applicable |
| Explosion occurrence | - No danger in solid form - In case of melted metal risk of explosion by contact with water. |

11. Stability and reactivity

Conditions to avoid: No decomposition if used to specification.

With contact to mercury, ammonia, acetylene, chlorine-gas and various acids may be incompatibility. There will be a corrode reaction.



WARNING:

This product can expose you to a chemical or chemicals such as Lead which is [are] known to the State of California to cause cancer or birth defects or other reproductive harm.

For more information go to: www.P65Warnings.ca.gov/product

12. Toxicology information

General information:

When used and handled according to specifications, the article does not have any harmful effects to our experience.

On skin: No irritant effect.

On eye: No irritating effect.

Sensitization: No sensitizing effects known.

13. Ecological information

General notes

Semi-finished articles from copper and copper-alloys are practically insoluble in water.

Potential of bioaccumulation

Copper is a basic essential element, it will not be accumulated, but by some living stored for later use.

14. Disposal considerations / Recycling

Parker Steel confirms that the articles from copper and copper alloys could and should be recycled by end of life in accordance with Annex II to Directive 75/422/EEC for the recovery operation R4 (recycling / re-clamation of metals).

Classification according to the Waste Catalogue Ordinance, of 07/24/2002

| Origin of the waste in according with EWC | EWC-Waste Code | Description |
|--|----------------|-------------------------|
| Waste from mechanical design processes | 12 01 03 | Non-ferrous metal chips |
| disassemble of old cars | 16 01 18 | Non-ferrous metal |
| Metals (including alloys) | 17 04 01 | copper, bronze, brass |
| Waste from shredding of metal-containing waste | 19 10 02 | Non-ferrous metal waste |
| Wastes from the mechanical processing (eg sorting, crushing) | 19 12 02 | Non-ferrous metal |

EU-transboundary shipment of waste Directive

| classification | Waste Code | Description |
|---|------------|--------------|
| B1 metals and metal containing waste, in massive form | B1010 | Copper scrap |

Contact Parker Steel or a local metal dealer for recycling information.

15. Transport information

There is no special risk of carrying copper alloys in solid form, either as a primary product or as scrap. EEC hazard labelling is not required.

Apply suitable measures concerning load securing in due consideration to dimension and mass of the articles.

16. Regulatory information

Labelling in accordance to the EC-regulations and SVHC candidate list

Semi-finished articles from copper and copper-alloy are not a substance or mixtures according to Regulation (EC) No. 1272/2008 on classification, labelling and packaging of substances and mixtures (GHS/CLP regulation).

The articles and packaging do not contain any of the particularly alarming substances (SVHC) mentioned in the candidate list in concentrations of more than 0.1% (w/w).

(SVHC-candidate list updated by ECHA on 15.12.2010)

Link to see the candidate list: http://echa.europa.eu/chem_data/candidate_list_en.asp

The products from copper and copper-alloy (with tinned or uncoated surface) have a chemical composition in accordance with the below listed Directives of the European Parliament and of the Council and Council/Commission Decisions and mentioned regulations:

| Item | Regulation |
|---------|---|
| ELV | DIRECTIVE 2000/53/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 September 2000 on end-of life vehicles (so-called ELV) according amendment of Annex II (2008/689/EG) COMMISSION DECISION of 27 June 2002 amending Annex II of Directive 2000/53/EC of the European Parliament and of the Council on end-of-life vehicles (2002/525/EC) COUNCIL DECISION of 20 September 2005 amending Annex II of Directive 2000/53/EC of the European Parliament and of the Council on end-of-life vehicles (2005/673/EC) |
| GADSL | VDA 232-101 Global Automotive Declarable Substance List (GADSL) |
| RoHS | DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (so-called RoHS -> as well with respect to China-RoHS SJ/T 11363-2006) COMMISSION DECISION of 18 August 2005 amending Directive 2002/95/EC of the European Parliament and of the Council for the purpose of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment (2005/618/EC) COMMISSION DECISION of 13 October 2005 amending for the purpose of adapting to the technical progress the Annex to Directive 2002/95/EC of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (2005/717/EC) COMMISSION DECISION of 21 October 2005 amending for the purpose of adapting to technical progress the Annex to Directive 2002/95/EC of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (2005/747/EC) COMMISSION DECISION of 10 June 2009 for the change of the annex to Directive 2002/95/EG of the European Parliament and of the Council as to excepting uses of lead, cadmium and mercury for the purpose of technical advance |
| WEEE | DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment |
| PFOS | Directive 2003/11/EG (Pentabromdiphenylether, Octabromdiphenylether) and 2006/112 EG (PFOS) of the EUROPEAN PARLIAMENT AND OF THE COUNCIL to change 76/769/EG for the use of dangerous substances and dangerous products. The products are free from PAH. |
| DecaBDE | DIRECTIVE 2005/717/EG of 1st July 2008 Flame retardent DecaBDE in electrical and electronic appliances. |

17. Other information

The given information is based on the present knowledge and our experiences. They are given for a safe and proper use of our articles. These given data don't have the meaning of insured properties. The information in this information sheet is made by our best knowledge and our conscience.