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KME-product: semi finished products from **Copper Zinc Lead Alloys**

Revised at: 27.06.2018

Information sheet for articles[1]

1. Identification of the article and of the supplier

Application / use of the article:
Articles from brass like tubes, rods, plates, sheets, coins and other semi-finished products in massive form

Further information contact / supplier information:

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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 ℃ 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

KME material Trade name	Material code (DIN CEN/TS 13388:2015)	Material number (DIN CEN/TS 13388:2015)	ASTM
-	CuZn35Pb1	CW 600 N	
-	CuZn35Pb2	CW 601 N	
-	CuZn36Pb2As	CW 602 N	
-	CuZn36Pb3	CW 603 N	
-	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	
-	CuZn35Pb1,5AlAs	CW 625N	
-	CuZn40Mn1Pb1	CW 720 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 (respective to individual alloy)

Number	Name of component	Classification CLP / EU	Content (w/w) / remark
CAS: 7439-92-1 EINECS: 231-100-4	Lead [1]	Repr. 1A ; H360 FD Lact. : H362 STOT RE 1 ; H372	Max 3,5 %
CAS: 7440-38-2 EINECS: 231-148-6	Arsenic	Acute Tox. 3, H301; Acute Tox. 3, H331; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	Max 0,15 %

[1] "*Lead*" was identified and listed by ECHA as SVHC. Inclusion date: 27.06.2018
This does not imply that safe use conditions have changed.

non harmonized classified alloy components (respective to individual alloy)

Number	Name of component	Classification
CAS: 7440-50-8 EINECS: 231-159-6	Copper	-
CAS: 7440-66-6 EINECS: 231-175-3	Zinc	-
CAS: 7439-96-5 EINECS: 231-105-1	Manganese	-
CAS: 7429-90-5 EINECS: 231-072-3	Aluminium	-

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 airborne 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://limitvalue.ifa.dguv.de/WebForm_gw2.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

Parameter	description
Colour	Metallic yellow
State of aggregation	solid
Density	8,3 g/cm3 (Lit.)
Solubility in water	insoluble
Odour	odourless
Melting point	870 - 900 ℃ (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.

10. 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.

11. 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.

12. 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.

13. Disposal considerations / Recycling

KME confirm 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 / reclamation of metals).
Classification according to the EU-Waste Catalogue Ordinance

KME is authorized to receive and recover waste from copper and copper alloys each broken down by source:

Origin of the waste in according with EWC	**EWC-Waste Code**	**Description**
Waste metal	02 01 10	Waste metal
Slags from primary and secondary production	10 06 01	Slags from primary and secondary production
Other particulates and dust	10 06 04	Other particulates and dust
Furnace slag	10 10 03	Furnace slag
Other particulates other than those mentioned in 10 10 11	10 10 12	Other particulates other than those mentioned in 10 10 11
Wastes from copper hydrometallurgical process other than those mentioned in 11 02 05	10 02 05	Wastes from copper hydrometallurgical process other than those mentioned in 11 02 05
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 KME or local metal dealer for recycling information.

14. 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.

15. Regulatory information

Labelling in accordance to the EC-regulations and SVHC candidate list
Semi-finished products 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 do contain following substances defined as SVHC in concentrations of more than 0.1% (w/w).

Substance	CAS/EINECS	List	Date of inclusion
Lead	CAS: 7439-92-1 EINECS: 231-100-4	SVHC	27.06.2018

The 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), at the time of the revision date of this information sheet.

(*SVHC-candidate list for authorization updated by ECHA)*
Link to the most recent update: http://echa.europa.eu/web/guest/candidate-list-table

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 GADSL	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) VDA 232-101 Global Automotive Declarable Substance List (GADSL)
RoHS 3 (assessment based on DIN EN 50581) DecaBDE	DIRECTIVE 2011/65/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 08 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU (so-called RoHS 3) **Applied exemption according annex III in case of lead-containing alloy composition in the article:** *6c) Copper alloy containing up to 4 % lead by weight* China-RoHS SJ/T 11363-2006) DIRECTIVE 2005/717/EG of 1st July 2008 Flame retardent DecaBDE in electrical and electronic appliances.
POP Stockholm Convention	EG/850/2004 – POP-Directive EU/519/2012 Regulation to change annex I of EG/850/2004 EU/2016/293- Regulation to change annex I of EG/850/2004 to add HBCD
PFOS	Directive 2003/11/EG (Pentabromdiphenylether, Octabromdiphenylether) and 2006/122 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.
Ozone-Layer	Regulation (EC)1005/2009: Substances that Deplete the Ozone Layer

- Cr VI - asbestos - mercury	The products are free from hexavalent chromium (CrVI) and asbestos There is no use of mercury in our alloy composition
Packaging material	94/62/EG (packaging)
Siloxane	The products are free from Octamethylcyclotetrasiloxane (D4) (EC No: 209-136-7, CAS No: 556-67-2) and Decamethylcyclopentasiloxane (D5) (EC No. 208-764-9, CAS No. 541-02-6)
TSCA	All ingredients are on the TCSCA Inventory list or are exempt from TSDA Inventory requirements.
SARA Sec. 313 RPT	The alloy contains one or more chemicals which may be subject to the reporting requirements. Refer to 40 CFR Part 372 to determine if your facility is subject to these reporting requirements. SARA listed forms of copper are considered present as shipped in solid metal forms; however operations such as melting, abrading, burning, welding, sawing, brazing, grinding, cutting, polishing and machining may generate forms subject to the reporting requirements. Refer to sec. 313.
California Proposition 65	• Chemicals known to cause cancer: 7439-92-1 lead • Chemicals known to cause reproductive toxicity for females or for males: 7439-92-1 lead • Chemicals known to cause development toxicity: 7439-92-1 lead In solid form there will be no exposure of chemicals to the air by the articles. If the articles 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 exposure to the air of the listed chemicals and the inhalation hazard could arise.

16. 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.