KME-product: semi-finished products from **copper zinc alloys with lead ≤ 0, 25 %**

Revised at: 26.09.2019

Information sheet for articles

1. Identification of the article and of the supplier

Supplier/Manufacturer // Application and use of the articles
KME SE affiliates, hereinafter referred to as KME, manufacture and supply products made of copper and copper alloys in the form of semi-finished products like hot and cold rolled bands, plates, sheets and strips, pressed and drawn pipes, tubes, profiles, rods, either uncoated or with tinned surface.

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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 non-hazardous. If they will 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 non-hazardous. 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 avoid by treatment in inert atmosphere.

3. Composition / information on ingredients

Description: copper zinc alloys with lead ≤ 0,25 % (metal in compact form)

Material codes: copper zinc alloy

KME material Trade name	Material Code (DIN CEN/TS 13388:2015)	Material number (DIN CEN/TS 13388:2015)	ASTM
SM41	CuZn38Sn1		C46400
	CuZn28Sn1As	CW706R	C44300
	CuZn28Sn1Sb		C44400
	CuZn28Sn1P		C44500
	CZ112	C712R	
SM42	CuZn38Sn1As	CW 717R	C46500
SM41	CuZn39Sn1	CW 719R	

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).

Harmonized classified alloy components (respective to individual alloy)

Number	Name of component	Classification CLP / EU	Content (w/w) / remark
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 %
CAS: 7439-92-1 EINECS: 231-100-4	Lead [1]	Repr. 1A ; H360 FD Lact. : H362 STOT RE 1 ; H372	Max 0,25 %

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

Non-EU-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: 7440-31-5 EINECS: 231-141-8	Tin	-

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. Firefighting 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 and storage	Measure
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 chapter 8
Storage, Co-storage, maximum storage	No special requirements. Look for surrounding conditions.

8. Exposure controls and personal protections

Limitation and control of the exposure at the working place
If breathable dust or smoke occurs by machining, avoid exposition to workers using 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 recommended, depending on the handling.
Eyes	Eye protection 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	8,4 g/cm3 (Lit.)
Solubility in water	insoluble
Odour	odourless
Melting point	890 – 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.

10. Stability and reactivity

Conditions to avoid: No decomposition if used to specification.
Contact to mercury, ammonia, ammonium chloride, ammonium hydroxide, ammonium nitrate, acetylene, chlorine-gas, hydrogen peroxide and various acids may be incompatibility.
A corrode reaction with uncontrolled heating effects could occur.

11. Toxicology information

General information:
While handling 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 got the authorization 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. REACH / SVHC

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: https://echa.europa.eu/de/candidate-list-table

REACH Article 7(2) requires producers or EU-importers of articles to notify ECHA if their article contains a substance on the Candidate List.

KME notified "*lead as component*" in articles with following brief description of the use of the substance in the article(s) and of the uses of the article(s) for which KME take responsibility (including the known downstream uses):

Notification service life name	Use of articles of copper alloys containing lead
Service life of articles made of copper alloys containing lead	• mechanical processing (e.g. bending, machining, milling, drilling, welding, soldering, grinding) of semi-finished articles into finished articles • assembly and installation of the final article, • maintenance and use of the final article • disposal of the article • collection, sorting and recycling of alloy constituents (e.g. copper)
Contributing activity/ technique for the environment	• Professional use: mechanical processing of semi-finished articles into finished articles → ERC12a + ERC12c • Professional use: welding of articles made from copper alloys containing lead → ERC 12b + ERC12c • Consumer: use of articles made from copper alloys containing lead → ERC10a + ERC 11a
Contributing activity/ technique for consumer	• Use of articles made from copper alloys containing lead AC1: Vehicles; AC2: Machinery, mechanical appliances, electrical/ electronic articles AC3: Electrical batteries and accumulators AC7: Metal articles
Contributing activity/ technique for workers	• Professional use: mechanical processing of semi-finished articles into finished articles → PROC 21 • Professional use: welding of articles made from copper alloys containing lead → PROC25
Technical function of substance during use	alloying element

16. Information regarding other regulations

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)
GADSL	VDA 232-101 Global Automotive Declarable Substance List (GADSL)
RoHS-3 (assessment based on DIN EN 50581)	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 (RoHS 3) COMMISSION DELEGATED DIRECTIVE (EU) 2017/2102 of 15 November 2017 amending Directive 2011/65/EU COMMISSION DELEGATED DIRECTIVE (EU) 2018/741 of 01 March 2018 amending Annex III to Directive 2011/65/EU **In case of lead-containing alloy applied exemption according annex III:** *6c) Copper alloy containing up to 4 % **lead** (w/w) (exemption extend until 21. July 2021)* China-RoHS SJ/T 11363-2006)
DecaBDE	DIRECTIVE 2005/717/EG of 1st July 2008 Flame retardant DecaBDE in electrical and electronic appliances.
WEEE	For KME articles (semi-finished products), this directive is not applicable.
POP Stockholm Convention	POP-Directive REGULATION (EU) 2019/1021 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on persistent organic pollutants to recast and repealing EG/850/2004 and associated amendments
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
Packaging material	Directive 94/62/EC (packaging and packaging waste)
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)
- Cr VI - asbestos - mercury	The products are free from hexavalent chromium (CrVI) and asbestos There is no use of mercury in our alloy composition

US State Regulations

TSCA	All alloy-components are listed on the TSCA (Toxic Substance ControlAct) list or are exempt from. All alloy-components are listed on SARA Section 313
SARA Section 312	Reporting and/or labelling requirements may be applicable for the components (including unintentional trace elements) of as-supplied alloy bar-stock; check your State and Local Regulatory Requirements for any reporting and labelling requirements.
U.S. California-Proposition 65 Carcinogens List **Lead** CAS: 7439-92-1	⚠ **WARNING**: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov. In solid form, there will be no exposure of chemicals to the air by the articles. If the articles will 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.
U.S. California - Proposition 65 Development List **Lead** CAS: 7439-92-1	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov. 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.
U.S. - California - Proposition 65 Reproductive Toxicity - Female **Lead** CAS: 7439-92-1	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov 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.
U.S. - California - Proposition 65 Reproductive Toxicity - Male **Lead** CAS: 7439-92-1	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov 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.

REACH

annex XVII to REACH Regulation (EU) No 1907/2006 **Lead** CAS: 7439-92-1	Lead, CAS: 7439-92-1, EINECS: 231-100-4 Some uses of lead in articles are restricted under Annex XVII of REACH. (entry 63 for lead and lead-compounds) This document, echa.europa.eu/documents/10162/13563/lead_guideline_information_en.pdf aims at providing a guideline concerning the interpretation of the scope of the restriction provisions in paragraphs 7 to 10 of entry 63 of Annex XVII to REACH Regulation (EU) No 1907/2006 on lead and its compounds in articles supplied to the general public. It has been drawn up to (i) clarify certain terms that define the scope of the restriction (e.g. "accessible part of articles", "normal/reasonably foreseeable conditions of use") (ii) provide non-exhaustive lists of article types (and examples of sub-types) which fall within (or out of) the scope of the restriction.
annex XVII to REACH Regulation (EU) No 1907/2006	Arsenic, CAS: 7440-38-2, EINECS: 231-148-6 Some uses of arsenic articles are restricted under Annex XVII of REACH. (entry 19 for arsenic compounds)

17. Disclaimer

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. They are given for a safe and proper use of our articles. These given data do not have the meaning of warranted characteristics of the specific delivered articles.
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