

EG-SAFETY DATA SHEET (EG Nr. 1907/2006)

Product name: "Coollaboratory Liquid Copper" Version 2.0 / ENG: Rewrite 03.09.2014

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

- **1.1** Identification of substance/preparation: "Coollaboratory Liquid Copper" metal paste on base of copper
- **1.2 Use of substance/preparation:** Thermal compound

1.3 EG-Supplier (Company/Supplier/Dealer): Coollaboratory Michael Metzke Mittagstr. 38 39124 Magdeburg Deutschland Tel: +49 3914001628 Fax: +49 3919907746

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Product support: E-Mail: <u>support@coollaboratory.com</u>

2. COMPOSITION/INFORMATION ON CONSTITUENTS

2.1 Chemical characterization: Alloy of copper (micro copper particles) suspended in a silicone matrix

Contents materials: COPPER CAS-Nr.: 7440-50-8 EG-Nr.: 231-159-6

3. POTENTIAL HAZARDS

3.1 Classification: No dangerous product in the sense of the guideline 67/548/EWG.

4. FIRST AID MEASURES

4.1 After inhalation:

The inhalation is not a possible way of the exposition.

4.2 After skin contact:

Wash off with plentifully water and soap, remove the contaminated clothes.

4.3 After eye contact:

Rinse out with plentifully lukewarm water with opened eyelid gap.

4.4 After swallowing:

Drink a lot of water immediately. Please consult your physician.



5. FIRE-FIGHTING MEASURING

- 5.1 Suitable fire extinguishing agents: Co-ordinate with environment. Water, foam, CO2 or dry powder
- 5.2 Special endangerment by the material or the product, its combustion products or developing gases: Not inflammable.

6. MEASURES TO BE TAKEN IN CASE OF UNINTENTIONAL RELEASE

- 6.1 **Personal precautionary measures:** Slip hazard by run out or buried product.
- 6.2 Environmental protection measures: Take up the run out product. Supply the product remainders for disposal.
- 6.3 Cleaning methods: Large quantities are absorbed (syringe) or up-turned. Remove any product residues by soap solution.

7. HANDLING AND STORAGE

7.1 Handling

7.1.1 References to safe handling: Avoid bury and unnecessary contact.

7.2 Storage

Plastics (PE, PP) are well suitable as container material, storage at room temperature, not at reach for children

8. EXPOSURE CONTROL AND PERSONAL PROTECTIVE EQUIPMENT

8.3 Individual protective equipment

8.3.1 Respiratory protection: Not necessary

8.3.2 Hand protection:

With full contact:	
Glove material:	Nitril India rubber
Layer strength:	0,4 mm
Break-through time:	< 480 Min.

8.3.3 Eye protection:

Wear protective goggles in case of potential contact with the eyes.

8.3.4 Body protection:

Wear suitable work clothing if there is a risk of splashing.

8.3.5 Data to the industrial hygiene:

Switch contaminated clothes. Wash your hands after work with the product.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

Form: pasty Liquid metal alloy Color: coppery Odor: characteristic

9.2 Safety-relevant data

Art	Wert
pH-value (20 °C)	not applicable
Melting point (°C)	not certain
Boiling point (°C)	not certain
Inflammability (°C)	> 250°C
flash point (°C)	not applicable
Vapour pressure (°C)	not available
Density (g/cm3)	1,3 g/cm ³
bulk density (kg/m3)	not applicable
Solubility in water (20°C in g/l)	insoluble
Solubility in organic solvents	insoluble
dynamic viscosity	not available
(mPa s/20° C)	(viscous)
lower explosion limit	not applicable
upper explosion limit	not applicable
Electrically conductivity	not available

10. STABILITY AND REACTIVITY

10.1 Conditions to be avoided:

When using correctly there are no dangerous reactions known. Beware of humity.

10.2 Substances to be avoided:

Hydrogen peroxide/hydrogen chloride, CO, CO2, sulphur oxide

11. TOXICOLOGICAL INFORMATION

11.1 Toxicological examinations

11.1 Acute toxicity:

The metal alloy has not been tested, the single components of the alloy are below the limits of acute toxicity even if a full resorption is assumed.

11.2 Effects at humans:

So far as the generally applicable regulations of industrial hygiene were adhered to, any harmful effect on the health has not become known.

After skin contact:	With frequent skin contact skin defatting is possible.
After inhalation:	Due to the very low steam pressure not applicably.
After eye contact:	Splashes in the eyes may cause irritations.



11.1.3 Further toxicological references:

Dangerous characteristics are not to be excluded, but with adequate use not probably.

11.3 General remarks:

The product is to be handled with the caution usual with chemicals.

12. ECOLOGICAL INFORMATION

12.1 Ecological toxicity:

The product is not miscible with water and shows a tendency toward sedimentation. Quantitative data for the ecological effect of this product are not present.

12.2 Overall evaluation:

In the case of appropriate handling and use no ecological problems are to be expected.

13. DISPOSAL INFORMATION

13.1 Disposal:

Intended use or recycling is to be preferred to the disposal. The product should be disposed according to the locally valid laws on waste disposal and (the competent authorities are responsible to give the necessary information).

13.2 Additional references:

Cleaning agent: Soap/water solution for surfaces.

14. TRANSPORT INFORMATION

- 14.1 Transportation by road/rail (ADR/RID/GGVSE): No hazardous goods
- 14.2 Transportation by sea/marine (IMDG-Code/GGVSee): No hazardous goods
- 14.3 Transportation by air transport (ICAO-IATA/DGR): No hazardous goods

14.4 Additional references:

The transportation regulations are quoted after the international adjustments and in the form, how they are used in Germany. Possible deviations in other countries are not considered.

15. **REGULATORY INFORMATION**

The alloy is not dangerous working material in the sense of the guideline 67/548/EWG. The product is compliant with the guideline 2002/95/EG (RoHS) and does not exceed the predetermined conditions of the guideline 2005/618/EG.

The product is equal to the terms and conditions of the ElektroG- particularly with regard to indexed commodity substance prohibition at the chapter 2,§5 (1).

National regulations:

Water endangerment class: 1 (low hazardous to waters)



16. OTHER DATA

Coollaboratory doesn't assume any responsibility for the incorrect usage of this product and the resulting damages and consequences.

The data rely on the today's conditions of our knowledge and serve to describe the product regarding safety precautions which can be met. They do not represent a warranty of the product described by characteristics.