

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.04.2018

Version number 3

Revision: 25.04.2018

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

- **1.1 Product identifier**
- **Trade name: Kupferbad cyanidisch**
Cyanidic copper bath
- **Article number:** 3050400502
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Galvanic bath
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Wieland Edelmetalle GmbH
Schwenninger Str. 13
75179 Pforzheim
Telefon +49 (07231)-1393-0, Telefax +49 (07231)-1393-100
- **Further information obtainable from:**
Wieland Edelmetalle GmbH
www.wieland-edelmetalle.de
msds@wieland-edelmetalle.de
- **1.4 Emergency telephone number:**
Emergency CONTACT (24-Hour-Number):GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

- | | |
|--------------|----------------------------------|
| Acute Tox. 3 | H301 Toxic if swallowed. |
| Acute Tox. 2 | H310 Fatal in contact with skin. |
| Acute Tox. 3 | H331 Toxic if inhaled. |



GHS05 corrosion

- | | |
|---------------|---|
| Skin Corr. 1A | H314 Causes severe skin burns and eye damage. |
| Eye Dam. 1 | H318 Causes serious eye damage. |



GHS09 environment

- | | |
|-------------------|---|
| Aquatic Chronic 2 | H411 Toxic to aquatic life with long lasting effects. |
|-------------------|---|

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS06 GHS09

- **Signal word** Danger

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· **Hazard-determining components of labelling:**

potassium cyanide

copper cyanide

· **Hazard statements**

H301+H331 Toxic if swallowed or if inhaled.

H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P260 Do not breathe dusts or mists.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

EUH031 Contact with acids liberates toxic gas.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 151-50-8 EINECS: 205-792-3	potassium cyanide ☠ Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	5-10%
CAS: 544-92-3 EINECS: 208-883-6	copper cyanide ☠ Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	1-5%
CAS: 497-19-8 EINECS: 207-838-8	sodium carbonate ⚠ Eye Irrit. 2, H319	1-5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

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- Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Hazards**
Danger of circulatory collapse.
Danger of impaired breathing.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** Hydrogen cyanide (HCN)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Do not store together with acids.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store under lock and key and with access restricted to technical experts or their assistants only.
- **Storage class:** 6.1B
- **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Short term filter device:
Filter B
- **Protection of hands:**



Protective gloves

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves**
Butyl rubber, BR
Nitrile rubber, NBR
Fluorocarbon rubber (Viton)
Chloroprene rubber, CR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Not suitable are gloves made of the following materials:**
Leather gloves
Strong material gloves
 - **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic

· pH-value at 20 °C: 12

· Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	105 °C

· Flash point: Not applicable.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Density at 20 °C: 1,04 g/cm³

· Solubility in / Miscibility with water: Not miscible or difficult to mix.

· Solvent content:

Organic solvents:	0,0 %
Water:	>85 %

· 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: Contact with acids releases toxic gases.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: Hydrogen cyanide (prussic acid)

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Toxic if swallowed or if inhaled.

Fatal in contact with skin.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	92.7 mg/kg (rat)
Dermal	LD50	64.9 mg/kg
Inhalative	LC50/4 h	6.49 mg/l

151-50-8 potassium cyanide

Oral	LD50	5 mg/kg (rat)
	LDLO	2.86 mg/kg (human) (RTECS)

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Dermal	LD50	5 mg/kg (ATE)
Inhalative	LC50/4 h	0.5 mg/l (ATE)
544-92-3 copper cyanide		
Oral	LD50	126 mg/kg (rat)
Dermal	LD50	5 mg/kg (ATE)
Inhalative	LC50/4 h	0.5 mg/l (ATE)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

151-50-8 potassium cyanide

LC50	0.45 mg/l (96h) (Lepomis macrochirus (bluegrill))
EC50	2 mg/l (48h) (Daphnia magna (water flea))
EC50	1.8-1.9 mg/l (72h) (Eutosiphon sulcatum) (CN)
IC50	0.03 mg/l (8d) (Sc.quadricauda)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Also poisonous for fish and plankton in water bodies.
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact manufacturer for recycling information.

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- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1935
· 14.2 UN proper shipping name · ADR · IMDG · IATA	1935 CYANIDE SOLUTION, N.O.S. (POTASSIUM CYANIDE, COPPER CYANIDE), ENVIRONMENTALLY HAZARDOUS CYANIDE SOLUTION, N.O.S., MARINE POLLUTANT CYANIDE SOLUTION, N.O.S.
· 14.3 Transport hazard class(es) · ADR	
	
· Class · Label	6.1 (T4) Toxic substances. 6.1
· IMDG	
	
· Class · Label	6.1 Toxic substances. 6.1
· IATA	
	
· Class · Label	6.1 Toxic substances. 6.1
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler):	Warning: Toxic substances. 60

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· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Remarks:	(POTASSIUM CYANIDE, COPPER CYANIDE)
· UN "Model Regulation":	UN1935, CYANIDE SOLUTION, N.O.S. (POTASSIUM CYANIDE, COPPER CYANIDE), ENVIRONMENTALLY HAZARDOUS, 6.1, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **Seveso category**
H2 ACUTE TOXIC
E2 Hazardous to the Aquatic Environment
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
 - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
 - **National regulations:**
 - **Technical instructions (air):**
- | Class | Share in % |
|-------|------------|
| III | 2.4 |
- **Waterhazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H300 Fatal if swallowed.
H310 Fatal in contact with skin.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 1: Acute toxicity – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**

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